# Oil, Paint and Drug Reporter

*The Chemical Market Authority Since 1871*

Volume 153 No. 26

June 28, 1948



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## Carbon Dioxide Makers Sued by U.S. as 'Trust'

Attorney General Tom C. Clark announced last Thursday the filing of a civil suit in the United States District Court for the Eastern District of New York, charging the Liquid Carbonic Corporation, Air Reduction Company, Pure Carbonic, Inc., Wyandotte Chemical Corporation, and International Carbonic Engineering Company with violations of the antitrust laws.

The complaint charges the defendants with the elimination of competition by price fixing, pooling of patents, conducting price wars against competitors, allocating of markets and customers, and the acquisition of plants and properties of competitors.

The purpose of the department's suit, Mr. Clark said, "is to secure additional relief not afforded by the action of the Federal Trade Commission under the Federal Trade Commission Act, such as divestiture of illegally acquired plants and compulsory licensing of abused patents."

On the previous day the Federal Trade Commission had issued a cease and desist order requiring four companies to terminate a "price-fixing conspiracy and other collusive practices."

The commission's charges were against Air Reduction Company and its subsidiary, Pure Carbonic, Inc., the Liquid Carbonic Corporation, and the Michigan Alkali Company, which, it said, is now operating as the Michigan Alkali Division of the Wyandotte Chemical Corporation.

## Miller Bill Becomes Law

The Miller bill, restoring authority to the Food and Drug Administration to prosecute cases of misbranding and adulteration after goods have left interstate commerce, was signed into law last Thursday by President Truman.

### *Limestone Free Import Bill Signed by Truman*

House bill 5275, providing for the free importation of limestone to be used in the manufacture of fertilizer was signed into law last Thursday by President Truman. The bill amends paragraph 1685 of the tariff act of 1930 to include "limestone, crude, crushed, or broken, when imported to be used in the manufacture of fertilizer" on the free list.

## 2,4-D Dust Spraying By Airplane Banned

Dusting of agricultural areas with 2,4-D by airplane was prohibited in an order issued last Monday by D. W. Rentzel, Administrator of Civil Aeronautics at the request of the Department of Agriculture. The order was the result of many complaints that drifting 2,4-D dust had injured cotton and other broad-leaf crops.

The CAA announced that when waivers are issued to operators using aircraft for dusting or spraying, a special provision will be included which will prohibit the use of 2,4-D in dust form. The restriction will not apply to 2,4-D sprays, or to insecticide dusts such as are used to destroy the boll weevil.

Agriculture's recommendation to the CAA is the outgrowth of H.R. 452 calling upon the Secretary of Agriculture to take action to prevent damage to valuable crops as a result of 2,4-D dust. Damage to date has resulted from dusting rather than spraying. Weed experts of the department are now making test flights to study the drift of 2,4-D sprays at various altitudes and under varying wind conditions. When these tests are completed, the results will be used as a basis for further action by the two departments to safeguard crops.

# Price Trend Goes Farther Down

Price views in the markets for chemicals, oils, and drugs for the most part were in a sort of pre-quarter lull last week. The scope of changes was rather narrow, and again only a few of them foreran the advances planned for July 1. The weight, therefore, was applied by the wide, further slump in edible and drying and other vegetable oils, in which some animal fats were joined. This, plus another recession in essential oils, far outweighed the few advances in chemicals, and the overall price index was further depressed, going down to 146.9, which was the last mark for May also.

Advances in heavy chemicals were limited to sodium thiosulphate and zinc sulphate. Additions to the predicted July 1 advancing list included sodium sulphydrate, barium carbonate, carbon tetrachloride, and blanc fixe. The past week's advances included also DDT and santonin. Titanium dioxide pigments were put up in one quarter. Spearmint and citronella were prominent among the cheaper essential oils. Copra got another cut.

Strikes in the alkali field did not come to their expected, hoped-for end. There was some talk of at least one more in the making. Similar trouble was hampering shipments of ammonia and fertilizer potash also. Demand for copper sulphate was particularly immediate among pesticides. Everybody wanted shipments of such materials at once—or sooner—the condition coming up to all that had been expected when bad weather began to cause postponements. Floods still exercised a restrictive influence, even on the response to the automotive industry's bigger call for nickel-plating salts.

### OPD Price Index

The OIL, PAINT AND DRUG REPORTER'S relative record of prices for chemicals and related materials is currently as follows:—

| June 25, 1948 | June 18, 1948 | June 26, 1947 |
|---|---|---|
| **146.9** | **147.4** | **143.2** |

The base of the OPD Price Index is the average of prices in 1926 and 1936, those years representing extremes of price undulations in the inter-war period.

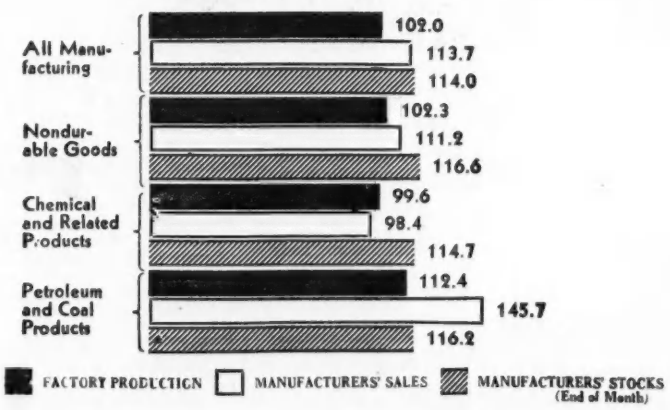
**OPD Index Monthly Averages**

| | 1948 | 1947 | 1946 | 1945 | 1941 |
|---|---|---|---|---|---|
| January | 150.4 | 150.9 | 135.3 | 133.0 | 107.8 |
| February | 147.2 | 151.9 | 135.4 | 133.2 | 110.3 |
| March | 146.2 | 154.9 | 135.2 | 132.7 | 111.9 |
| April | 146.2 | 152.3 | 134.9 | 132.2 | 115.5 |
| May | 146.7 | 146.1 | 135.1 | 132.5 | 118.2 |
| June | 147.3 | 143.9 | 135.4 | 132.5 | 121.9 |
| The year | *147.4 | 147.6 | 138.8 | 133.8 | 123.2 |

* Six months.

### Business in March, 1948

100=Same Month in 1947




# Ammonium Sulphate Makers to Get 10% of Army's Anhydrous Ammonia

Ten percent of all the anhydrous ammonia produced by the Army at its ordnance plants is to be made available to domestic producers of ammonium sulphate for domestic use under provisions written into the appropriation bill for the European Recovery Program approved during the closing hours of Congress.

It is estimated that this will amount to about 30,000 tons or a windfall to the fertilizer manufacturers in the form of ammonium sulphate of between 120,000 and 125,000 tons which might not otherwise have been available for domestic agriculture. Most of this, however, will go to the Pacific coast and northwest as a result of the wording of the bill.

It is provided that in making the ammonia available, the Army shall distribute it as directed by the Department of Commerce. The department is required to give preference in the distribution to producers of ammonium sulphate who have ceased to produce or who are faced with an imminent shutdown in production for want of anhydrous ammonia.

It is primarily on the West Coast, where the producers are facing hardship for lack of anhydrous ammonia, and it is felt that the 30,000 tons that will be available from the Army can readily be consumed by the three ammonium sulphate plants in California and the one plant at Salem, Ore. The provision was written into the bill largely at the insistence of Senator Wayne Morse of Oregon.

As originally adopted in the senate, this provision of the bill stated only that the Army had to make available sufficient anhydrous ammonia to meet the needs of the fertilizer manufacturers. Senator Morse estimated that this amounted to about 5 percent of the Army's production. The ammonium sulphate made from the ammonia also was to be shipped abroad, principally to China and Japan.

The flat figure of 10 percent of the production was written into the bill by the conference committee as a substitute for the Morse proposal. Also the requirement that the sulphate be exported was eliminated, thus making the material available for domestic use.

Another important provision of the appropriation bill of interest to the fertilizer industry is the requirement that the Army supply 50 percent of the nitrogen export requirements of this country under the world allocation program of the International Emergency Food Committee. The conference committee retained this provision and thus the export of commercially produced nitrogenous fertilizers are not expected to exceed 30,500 tons this year.

## Chromic Acid Export Quotas Discussion Set for June 30

Producers, consumers and exporters of chromic acid have been invited to a meeting by the Office of International Trade to discuss third quarter export quotas for this material and the present production and supply situation. The meeting will be held June 30 under the direction of Charles C. Concannon, chief of the chemicals and health products branch of OIT.

Export quotas for the materials for each of the two quarters of this year have been running at about 500,000 pounds. Some of the small consumers have been complaining of the difficulties of obtaining supplies of the acid, contending that the government has set the quotas too high. Present domestic production is running close to capacity and European production is not yet back to normal.

The following persons have accepted invitations to attend the meeting:—Raymond M. Shock, executive secretary, National Association of Metal Finishers; Irving Glass, executive vice-president, Tanners Council; James L. Donnelly, executive vice-president, Illinois Manufacturers Association; S. W. White jr., secretary, Mutual Chemical Company; Caesar Grasselli, E. I. du Pont de Nemours & Co.; C. D. Marlett, vice-president, Martin Dennis Company; H. Coster, treasurer, Mercantile Metals & Ore Corporation; T. J. Heafy, president, T. J. Heafy & Co.; Robert C. Winthrop jr., assistant export manager, G. R. Coleman & Co., and Albert Baker, Bradley & Baker.

## Stream Pollution Bill Approved by Congress

The stream pollution bill, S. 418, was awaiting the president's signature last week. The conference report on the measure was approved during the closing hours of the session by congress and the bill was forwarded to the White House.

The purpose of the bill is to bring about a reduction in the polluting of streams by industries and cities. Under its provisions all new industries established on streams and waterways must have facilities for treating their waste before discharge into the stream. Cities and regional authorities are authorized to attain loans from the Federal Works Agency up to $250,000 for construction of waste treatment facilities.

As originally proposed, the legislation made provision for loans to industries by the Reconstruction Finance Corporation for construction of waste treatment facilities, but this was eliminated before the bill was passed and industries will have to finance such construction with their own funds.

The overall supervision of stream pollution is placed in the hands of the United States Public Health Service. It would make investigations of pollution and approve the abatement plans of the cities and regional authorities. It would also set up the standards for industrial abatement plans.

## Tin Smelter Operation By U.S. Extended Two Years

Government operation of the RFC's tin smelting plant at Texas City, Texas, was continued for a period of two years until June 30, 1951, during the closing days of Congress. The bill (S. 2830) is now awaiting the expected signature of the President.

As originally passed by the senate, it provided for continued government operation of the plant until June 30, 1954. The house cut the period to one year and the June 30, 1951, date was arrived at in conference.

## Fats and Oils Quotas Shifted

The Department of Agriculture has announced the following emergency export cancellation and transfer:

Previous April-June commercial procurement allocations of 400,000 pounds of lard, and 150,000 pounds each of cottonseed and soybean oil to the Union of South Africa, and of 420,000 pounds of coconut oil to Mexico were cancelled at the request of the respective governments.

Previous allocations for April-June to Trieste of 275,000 pounds of coconut oil and 220,000 pounds of inedible tallow were transferred from "commercial" to "PMA" procurement.

## Paraffin Wax Available For Export to Mexico

The Office of International Trade announced last Monday that a limited quantity of fully refined paraffin wax (schedule B. No. 504600) is now available for export to Mexico and effective immediately license applications against the second quarter quota will be considered, with the prevailing end use restriction for this commodity applying also to Mexico.

The action, it was stated, is in accordance with the statement of OIT that when the supply situation had sufficiently improved to permit the resumption of exports of paraffin wax to Mexico, announcement would be made in a "Current Export Bulletin." Formerly, applications to export paraffin wax of any grade to Mexico have not been considered by OIT but have been returned without action to the applicant.

## Deionization in One Step Practicable with New Resin

A major advance in deionization processes has been made possible by the development of a new, strongly basic exchange resin, designated as "IRA-400," which when used with the acidic resin "IR-105" in a mixed bed, makes possible for the first time in ion-exchange resin history a one-step, one container, complete deionization operation, the Resinous Products & Chemical Company declared last Thursday in announcing the addition of four new products to its line of ion-exchange resins.

Company officials said that the use of this method makes possible the splitting of neutral salts and their complete removal from the solution, at the same time maintaining a neutral pH. Viscous solutions, heavy syrups and gelatinous suspensions heretofore difficult to process can now be purified successfully by this method, it was said.

The use of "IRA-400" resin alone provides action in anion exchange reactions comparable to the action of sulphonic acid type resins in cation exchange operations. It is the first resin, according to the producer, which makes reverse deionization possible in an operation in which the anions are removed prior to the cations.

The "IR-105" resin is a caton exchange resin of the sulphonic acid type claimed to provide high absorption capacity, and, due to uniform bead size, to offer better hydraulic characteristics and less channeling.

"Amberlite IRC-50" is a new cation exchange resin deriving its functionality from weakly acidic dicarboxylic groups. Being the first white exchange resin, it is expected by the producers to find ready acceptance in the pharmaceutical, cosmetic, and food processing industries. It's extreme selectivity, it was stated, makes possible the separation of such similar materials as amino acids, and by modification with buffers the pH may be controlled to separate various organic acids, alkaloids and biologicals.

Another resin being produced is "IR-120," a sulphonic acid type of cation exchange resin which possesses only one type of reaction center. It is therefore unifunctional, and claimed by the producer to be particularly effective in operations requiring high capacity and resistance to strong alkalies, acids, and oxidizing agents.

## OIT Adds Chemicals To BLT Export List

The Office of International Trade announced last Tuesday that the following commodities may be exported under the provisions of the BLT (blanket) export license procedure:—Sodium carbonate, calcined or soda ash; sodium hydroxide or caustic soda, except in small packages, and soda ash, causticized. The blanket license is a procedure under which the same commodity can be shipped to two or more consignees in the same destination area under a single license document.

## Armed Forces Technical Personnel Bill Approved

A clarification of existing law so as to permit the Secretary of Air Force to create thirteen new professional and scientific positions in the Department of Air Force was approved by Congress shortly before adjournment and the bill (S. 2505) is now awaiting the signature of the President.

Under the language of the law enacted last year, it was not certain whether the new professional and scientific positions authorized for the Army and Navy also applied to the Air Force. The bill clarifies this point. The new positions will pay salaries ranging from $10,000 to $15,000 annually.

## 'Metopon' Rules Relaxed By Treasury Department

The Treasury Department has relaxed its restrictions on the sale of methyldihydromorphinone hydrochloride sufficiently to release the product to qualified wholesale drug dealers, hospitals, druggists and practitioners, for use in treatment of serious chronic pain cases.

Known as "metopon" the drug has produced such satisfactory results in the treatment of cancer cases that the department has decided to make it more readily available in the relief of chronic pain. Subject to compliance with Federal narcotics laws, physicians may not obtain the drug from wholesale dealers or may make it available to patients by prescription.

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## Surplus Materials and Equipment Offered

Chemicals and related materials currently offered as surplus by the War Assets Administration on closed bids to the dates given or at fixed prices as stated, include the following items:—

Cresol, saponated, 2,500 gallons, Philadelphia, PHL-OL-455, July 9.

Sealer, clear blue & green, approx. 1,087 gallons in twenty metal drums, Philadelphia, PHL-OL-455, July 9.

Operating equipment and supplies currently offered by WAA in fixed-price and open-bid sales include the following:—

Bag liners, waterproof paper, various sizes, 6,034, Philadelphia, PHL-OL-455, July 9.

Clarifier, oil, driven by 3 HP electric motor, capacity 4,000 gallons per hour, Cincinnati, CIO (OL) 1,567, July 14.

Dust collecting equipment, Cincinnati, CIO (OL) 1,567, July 14.

Hoists, 42, various types, several lots, Cincinnati, CIO (OL) 1,567, July 14.

Lift trucks, six, Cincinnati, CIO (OL) 1,567, July 14.

Pumps, coolant, with ½ HP electric motors, sixty-five, water, with 2 HP electric motor, five, Cincinnati, CIO (OL) 1,567, July 14.

Trailer, one, capacity twelve tons, Philadelphia, PHL-OL-455, July 9.

## USDA Revises List Of Food Import Controls

The list of food products, mostly vegetable oils and seeds, contained in appendix A to WFO-63 was revised last week by the Department of Agriculture to include all changes made in the list since its last publication. WFO-63 is the food import control order issued during the war and still in operation.

In relisting the products still subject to control, officials of the department said that no changes have been made other than those which have previously been announced. The purpose of the relisting is to have all the items under control in a single document for the convenience of the industry and officials handling import controls.

## Chlorosulphonic Acid Up

E. I. du Pont de Nemours & Co., Wilmington, Del., last Friday announced an increase of 25 cents per 100 pounds in its price for chlorosulphonic acid. The increase, the first above the prewar price for the material, was forced by increased costs of raw materials, production and transportation, according to the company.

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## Nitrogen Plant Bidders Queried on Plans by Army

The three remaining bidders for the leasing of the Army-owned Cactus Ordnance Works have been asked by the Army for a detailed report on their plans to achieve maximum production of nitrogenous fertilizer in the event they are awarded the leasing contract. They are to supply the information by July 1. A fourth company, Spencer-Oronite Company, present operator of the plant, has dropped out of the bidding and was not included in the Army's request.

The request for the information grows out of the instructions given by congress when it turned down the Army's proposal that it be granted appropriations to increase production of fertilizers at each of its operating nitrogen plants. Congress said that instead of the Army bearing this expense it should be borne by the lessees. It also demanded that when the plants are leased they shall be operated to their fullest capacity.

Only the Cactus plant is presently involved in any leasing negotiations and the successful bidder for that plant therefore will have to make the capital expenditures required to bring it up to full production. The other plants in operation are not being offered for lease and the Army will be permitted to use its own funds to expand facilities at these plants under an interpretation placed upon the congressional instructions by Senator Styles Bridges of New Hampshire, chairman of the senate appropriations committee which handled the matter.

The Army says that it plans to increase production at the Morgantown, W. Va., plant to add about 15,000 tons of nitrogen annually to its output. This can be done at a cost of about $750,000. The other prospect of increasing the Army's nitrogen output is by utilizing the two idle "trains" at the Missouri, La., plant. Part of this plant is now being utilized by the Bureau of Mines for its liquid fuel experiments. The two "trains" are capable of producing about 24,000 tons of nitrogen annually, but will have to be moved to some other location where there is an assured gas supply. The Army places the cost of the moving at $3,200,000, but hasn't decided where they are to be relocated.

## Texas Gulf Sulphur Co. Elects Maercky Vice-Pres.

P. George Maercky was elected vice-president of the Texas Gulf Sulphur Company at a recent meeting of the directors. Mr. Maercky has been active in handling the affairs of the company in the southwest for many years. He will continue to make his headquarters in Houston, Texas.

## Lithopone Export Quota Up

An improved supply situation made it possible last week for an increase to be made in the export quota of lithopone for the second quarter by the Office of International Trade. The agency therefore announced an increase of 2,000,000 pounds in the second quarter export quota of this material, over and above the quota previously established.

### *Foreign Market Lists*

Lists of foreign outlets for chemicals and related materials and consumers goods recently compiled by the Commercial Intelligence Division of the United States Department of Commerce, include the following, which are available from the division at $1 for a list for any one country:—

Chemical importers, dealers—Portugal; manufacturers—Belgium.

Medicinal and toilet preparation manufacturers—Ireland.

Oil (fish and vegetable) importers, dealers, refiners—Argentina.

Paint and varnish manufacturers—Morocco; El Salvador.

Paraffin wax importers, dealers—Brazil.

### *Foreign Sales Leads*

Anyone interested in supplying the following inquiries with goods or information can get the full address of the inquirer by communicating—not by telephone, please—with OPD office.

Aniline dyes, Antwerp, Belgium (BZ-2).

Caustic soda, Sao Luiz, Brazil (BZ-1, agency).

Chemicals, Sao Luiz, Brazil (BZ-1, agency); Bangkok, Siam (BZ-5, agency).

Chrome green, Antwerp, Belgium (BZ-2).

Dyes, including indigosols and naphthols, Pfastatt-le-Chateau, France (BZ-3).

Iron oxides, synthetic, red, yellow, brown, black, Antwerp, Belgium (BZ-2).

Refractory earth, Pisa, Italy (BZ-4).

Solvents, Bangkok, Siam (BZ-5, agency).

## ECA Announces Additional Procurement Authorizations

Industrial equipment and a number of industrial raw materials were included in new procurement authorizations by the Economic Cooperation Administration, amounting to $215,071,075, announced last Monday. The previous week's authorizations were the largest of any single week and brought the total procurement authorizations, including ocean transportation, to $603,808,104.

Unless otherwise specified in the following, the procuring agency is the government of the participating country or its authorized agents or importers; and the country of origin is the United States. In the case of Bizone Germany, the procuring agency is the Army. Among the week's authorizations were the following:—

To France—$150,000 for graphite electrodes, $500,000 for sulphur, $1,448,000 for lead, $136,000 for zinc, $400,000 for carbon black, $200,000 for raw sulphur, $480,000 for linseed cake and (or) meal, $10,446,000 for petroleum products, $3,247,000 for petroleum products for French North Africa, $290,000 for zinc oxide from Newfoundland, $563,000 for zinc from Canada, $100,000 for nickel from Canada, $14,132,000 for petroleum products from Iraq and Saudi Arabia, and $2,814,000 for crude oil from Venezuela.

To United Kingdom—$18,154,860 for petroleum products from Netherlands West Indies, $500,000 for lead, $900,000 for aluminum from Canada, $1,100,000 for sulphur, $4,500,000 for copper from Canada, $2,300,000 for lead from Canada, $3,300,000 for zinc from Canada, $3,500,000 for zinc from United States and $2,400,000 for carbon black.

To Bizone Germany—$1,200,000 for phosphate rock from French North Africa, $3,800,000 for soluble phosphate from Belgium-Luxembourg and $2,460,000 for olive oil from Greece.

To Denmark—$157,500 for linseed cake and meal, $1,880,700 for petroleum products from the United States, $3,520,400 for petroleum products from Venezuela and $50,000 for cottonseed meal from Haiti.

To Italy—$285,000 for carbon black, $2,592,000 for petroleum products, $9,300,000 for petroleum products from Iran-Iraq and $493,000 for copper from Chile.

To Netherlands—$650,000 for nitrogen fertilizer from Chile.

To Norway—$160,000 for linseed oil cake and meal.

## Reynolds Metals, WAA Discuss Aluminum Plants

Reynolds Metals Company has entered into negotiations with the War Assets Administration for an extension of its present leases of four aluminum plants. The plants are the Hurricane Creek plant, near Bauxite, Ark., the Jones-Mill reduction plant, near Malbern, Ark., the Troutdale reduction plant in Oregon, and the McCook, Ill., sheet mill plant.

The company is now operating the four plants under five-year leases, with option to renew for two years. It is understood that the negotiations involve long term leasing of the plants, some of them to run for seventeen years with an option to purchase.

## Sodium Sulphate Plant Completed in Canada

The government of Saskatchewan, Canada, has opened its new sodium sulphate plant at Chaplin. Built at a cost of approximately $1,500,000, the plant has an estimated annual production capacity of 150,000 tons, and tests have indicated that the sodium sulphate content of its production is 96.4 percent or higher. Funds for the construction of the plant were drawn from other government industries, and it is expected that the government will realize more than $1,000,000 annually from its products.

## Lever Brothers Buys J.F. Jelke Company

The outright purchase of John F. Jelke Company, margarin manufacturer, Chicago, by the Lever Brothers Company, Cambridge, Mass., was announced last Wednesday. The Chicago firm is said to have an annual sales volume of nearly $25,000,000. Jelke also manufactures and distributes a bulk shortening, a mayonnaise, a salad dressing and a sandwich spread, all under the trade name of "Good Luck." It will operate under its present name as a separate subsidiary of Lever Brothers.

## *S. Alkali Technical Head*

Gustave Heinemann, since 1934 chief chemist at the Corpus Christi, Tex., plant operated by the Southern Alkali Corporation, subsidiary of Pittsburgh Plate Glass Company, has been given the additional duties of technical director, it was announced last Wednesday. For four years prior to joining Southern Alkali, he was a chemical engineer at the Barberton, Ohio, alkali producing plant of the parent company.

## Alcohol Tax Bill Approved By House; Dies in Senate

The Grant bill (H.R. 6800) to substitute a flat tax of $3 per gallon on distilled spirits consumed in food, drugs and flavoring extracts for the present $9 per gallon tax with the privilege of a $6 refund was passed by the house shortly before adjournment. It failed to receive consideration in the senate, however, and unless congress is called back into special session the bill is dead.

The house voted approval of the bill under suspension of the rules that required a two-thirds majority for passage. No opposition was expressed to its provisions on the floor and it was approved without a dissenting voice. But the confusion in the senate was such that it could not be taken up. The Proprietary Association of America, which is the chief sponsor of the bill, plans to renew efforts next session to get its approval.

# National Fertilizer Association Defers Selection of President

*White Sulphur Springs, June 23*

The new board of directors of the National Fertilizer Association organized today, following the close of the association's twenty-third annual convention which opened here Monday. It elected as its chairman R. L. King, of the Georgia Fertilizer Company, Valdosta, Ga., to succeed Weller Noble, of the Pacific Guano Company, Berkeley, Cal. The new vice-chairman of the board is C. T. Prindeville, of Swift & Co., Chicago.

The directors did not select a successor for Maurice H. Lockwood as full-time president of the association. Mr. Lockwood is retiring June 30 to become affiliated with the International Minerals & Chemical Corporation, Chicago. He was elected by the convention as a member of the board to succeed H. B. Baylor, whom he succeeds also with the International corporation. A committee of the board will interview applicants for the office of president. Pending a selection, the executive management of the headquarters in Washington will be in the hands of D. S. Murph, who has been continued by the board in the office of secretary-treasurer.

This year's NFA annual meeting was particularly interesting in its program of broadly educative addresses. It was also the best attended in the association's twenty-three years, the registration totaling 525. A program of still more extensive public relations activities was laid out for the ensuing year, also several tours were arranged for contacts and discussions with Federal and State agricultural experimental stations and with national organizations in various technical divisions of agriculture.

The report of the budget committe by R. L. King, chairman, presented a 1948-9 estimate of $245,703, compared with $224,055 in the past year, the rate of dues to be unchanged. The reserve fund was reported to be $131,200. The report was approved.

**Directors Elected**

Through adoption of the report of the nominating committee, submitted by John E. Powell, the convention re-elected for a three-year term three directors at large—John A. Miller, of the Price Chemical Company, Louisville; J. H. Owens, of the Roanoke Guano Company, Roanoke, Ala.; C. T. Prindeville, of Swift & Co., Chicago—elected one new director at large for the same term—Maurice H. Lockwood, of the International Minerals & Chemical Corporation, Chicago—elected two to fill vacancies in the class of 1950—E. A. Geohegan, of the Southern Cotton Oil Company, New Orleans; Walter Meekin, of the Consolidated Rendering Company, Boston—re-elected eight district directors—James W. Dean, of the Knoxville Fertilizer Company, Knoxville, Tenn.; J. H. Epting, of the Epting Distributing Company, Leesville, S. C.; M. G. Field, of the Meridian Fertilizer Factory, Hattiesburg, Miss.; Arthur W. Higgins, of the A. W. Higgins Company, Presque Isle, Me.; C. R. Martin, of the Miami Fertilizer Company, Dayton, Ohio; E. S. Russell, of the Old Deerfield Fertilizer Company, South Deerfield, Mass.; A. A. Schultz, of the Reading Bone Fertilizer Company, Reading, Pa.; H. A. Thullberg, of Haines City Fertilizer Works, Haines City, Fla.—and elected one district director to fill a vacancy—A. W. Weaver, of the Weaver Fertilizer Company, Norfolk, Va.

**Executive Report**

Because farmers rely heavily on dealers and agents for counsel and guidance, fer-

—*Continued on page 40*

## WAA Opens Surplus High Explosives Sale

More than 3,500,000 pounds of war-surplus high explosive M-1 and M-3 demolition blocks and MK-8 demolition charge were offered for sale last week at fixed prices by War Assets Administration. The sale is continuous and offers to purchase will be accepted concurrently from all classes of buyers. Approved offers from priority buyers will be filled July 21, after which other offers will be filled as received.

Minimum quantity of purchase is 1,500 pounds. Prices, f.o.b. location, are as follows: M-1, 75 cents per chain of eight blocks (2½ pounds each); M-3, 10 cents each per 2¼-pound blocks, and M-6, $2.25 each per charge. Offers to purchase should be addressed to War Assets Administrations, accounting division, examinations branch, collection section, Washington 25, D. C., and should be marked "Explosives Sale, Demolition Blocks, Number 198-1."

## Petroleum Agreements Delay Requested by House Group

The Department of Justice has been requested by the house small business committee to hold up action on the voluntary allocation agreement on petroleum until further investigation is made by the committee of complaints from independent jobbers and retailers.

Some of the complainants fear that they may receive less oil under the agreement than they are now getting, it was stated by a committee aide. The committee was scheduled to hold a meeting Saturday to air the complaints.

# *Washington Talks It Over*

**By Ralph L. Cherry**

Two "sleepers" written into the bill for the military draft by congress during the closing hours of its session have caused more consternation in business and government circles than almost anything else done during the session. They were slipped into the bill in the confusion of the dying congress without publicity and were not discovered until the day following adjournment and members had gone to Philadelphia for the Republican convention.

The first of the amendments gives the Secretary of Defense the power to allocate steel for defense contracts. It was offered on behalf of little business because of fear that their big competitors will get all of the steel and the little fellows with defense contracts will have no steel to fulfill them with. The other authorizes the President to direct industry to accept defense contracts and give priority on delivery under penalty of plant seizure if they refuse.

Taken together the two amendments constitute the opening wedge to the return of controls over industry which the administration had been demanding for more than a year and the Republican congress steadfastly refused to grant. Just why the Republicans suddenly about-faced on the matter isn't clear, but it is reasoned that they feared the defense program might bog down without such authority and to keep their skirts clean politically they yielded to the President. Furthermore, as the defense program gets going and materials become scarcer and the need for allocation becomes more apparent it will be easier to enlarge existing authority than it will be to start out from scratch with nothing on the statute books.

But the big question mark is:—What does the power to allocate steel do to the plans for a voluntary steel allocation agreement under Public Law 395? Secretary of Commerce Sawyer says that it should not interfere with the making of the voluntary agreement one bit. He says that there is nothing to prevent the steel producers from withdrawing from the agreement any time they want to.

Industry people think otherwise, however. They ask what is the use of an agreement if the government can move in at any time and allocate steel and upset any program that might have been agreed upon. They can't see the idea of an agreement just for the sake of having an agreement, especially when it carries with it the knowledge that the trust busters in the Justice Department will be eyeing every move they make to see that they don't step over the line of the agreement.

Whether congress realized it or not, when it wrote the two provisions in the draft law it just about put the last nail in the lid of the coffin for Public Law 395.

### Drug Transport Service Offered

Producers and distributors of drugs, medicines and hospital supplies are being advised by the transportation section of the American Drug Manufacturers Association of a new delivery service started up to serve the New York area for their exclusive benefit. The section believes that it offers superior delivery service at greatly reduced costs and will be well worth the while of the industry to look into it.

The drug industry is well aware of the greatly increased transportation expenses, including substantial increases in city delivery costs, regardless how these deliveries are now made. Many of the increases, particularly for inter-city transportation, cannot be avoided. In recent years local deliverymen have complained that whereas formerly a truck would make as high as eighty to 100 deliveries per day, that at the present time many trucks could make only approximately twenty deliveries per day, due to traffic

—*Continued on page 34*

## Army Foreign Aid Buying Bill Goes to White House

Congressional action was completed before adjournment on S.2376 setting up a revolving fund of $150,000,000 for use by the army in purchasing certain materials needed for the industries of the occupied areas. The bill is now awaiting the signature of the President.

The money will be used by the Army to purchase natural fibers, including cotton waste, produced in the United States, starch, dyestuffs, roller leather and card clothing as may be used in finishing and processing such fibers. These products would be consumed in the industries of Japan and Germany and the finished products sold and the proceeds placed back into the fund for future expenditures.

## Lead Import Bill Signed

President Truman signed the bill for free importation of lead into law last Tuesday. The bill H.R. 6489 suspends all tariff duties until June 30, 1949, on imports of lead-bearing ores, mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead, scrap lead, antimonial lead and antimonial scrap lead.

*Import*

Many important basic raw materials, chemicals, and allied products are now available for shipment from various parts of the world to the U. S. A. If you are unable to obtain what you need in the U. S., send us complete particulars as we can undoubtedly be of assistance to you in securing what you require.

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Few houses anywhere are so well equipped as we are for International trade in chemicals. Our 40 years of importing and exporting chemicals have made us familiar traders in world markets from Rio to Bombay, from London to Shanghai.

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*"manufacturers of Driers for the Paint and Varnish Trade"*

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Boulder, Colorado
*producers of fine organic chemicals*

*Export Inquiries solicited for the Products of*
C. M. ARMSTRONG, INC.
New York, N. Y.
*"lactic acid and lactates"*

*Export Inquiries solicited for the Products of*
WESTVACO CHEMICAL CORPORATION
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*We also offer for export the solvents produced by*
PHILLIPS PETROLEUM COMPANY
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## THE SHEPHERD CHEMICAL COMPANY'S

**SOLID COBALT OCTATE, MODIFIED**
**SOLID MANGANESE OCTATE, MODIFIED**

These concentrated Driers have been designed primarily for the export trade. Due to their exceptionally high metal content and the elimination of solvents and thinners they offer an attractive saving in freight, packages, handling and storage. These driers have low melting points, are easily soluble and have excellent stability. We consider their introduction to be an important advance in drier technology.

*And other Driers for Paint and Varnish Manufacturers*

**LIQUID DRIERS—SHEPHERD STD. TYPE**
Liquid Cobalt
Liquid Iron Linoleate
Liquid Lead
Lead Paste
Liquid Manganese

**LIQUID DRIERS—NAPHTHENATE TYPE**
Liq. Calcium Naphthenate
Liquid Cobalt Naphthenate
Liquid Lead Naphthenate
Liq. Mang. Naphthenate
Liquid Zinc Naphthenate

**LIQUID DRIERS—TALLATE TYPE**
Liquid Cobalt Tallate
Liquid Lead Tallate
Liquid Manganese Tallate

**SOLID LINOLEATES**
Cobalt Linoleate
Lead Linoleate
Manganese Linoleate

**SOLID NAPHTHENATES**
Cobalt Naphthenate
Manganese Naphthenate
Lead Naphthenate
Zinc Naphthenate

**SOLID TALLATES**
Cobalt Tallate
Manganese Tallate
Lead Tallate

**RESINATES—PRECIPITATED**
Aluminum Resinate
Calcium Resinate
Cobalt Resinate
Copper Resinate
Iron Resinate
Lead Resinate
Manganese Resinate
Zinc Resinate

**RESINATES—FUSED**
Cobalt Resinate
Lead Resinate
Manganese Resinate

**COBALT SALTS**
Cobalt Acetate
Cobalt Carbonate
Cobalt Chloride
Cobalt Hydrate
Cobalt Nitrate
Cobalt Phosphate
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Liquid Copper Naphthenate
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# Industrial Application Of Chemicals

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### 5-Aminoacridin

**Disinfectant**—Reported as potent bactericide.

### 4-(4'-Aminobenzenesulphonamido)-benzene Sulphonamide

**Pharmaceutical**—Starting point (U.S. 2247913) in making condensation products with an aldose, which are readily soluble with neutral reaction and are claimed to be active against bacterial infections, especially against gonococci.

### Ammonium Stearate

**Building Construction** — Waterproofing agent for cements, concrete, stucco.

**Cosmetic**—Base material in making vanishing creams, brushless shaving creams, lipsticks, and the like.

**Miscellaneous**—Releasing agent or dry lubricant in molding and casting operations, tabletting and protection of hygroscopic materials.

Waterproofing agent for cordage and rope.

**Paper**—Waterproofing agent and ingredient of waterproofing compositions.

**Textile**—Waterproofing agent and ingredient of waterproofing compositions.

### Barium Oxide, Porous

**Analysis**—Drying agent which does not form canals, does not paste, holds its power to absorb humidity even at temperatures up to 1000°C., is a powerful desiccator.

**Chemical**—Drying agent for alcohols, such as ethyl, methyl, butyl; aldehydes, benzene, gases (ammonia, sulphur dioxide, methyl chloride, and others), hydrocarbons, naphthas, toluene.

**Petroleum**—Drying agent for gasoline, kerosene, petroleum ether.

### Benzyltrimethyl-Ammonium Chloride

**Chemical**—Starting point in making benzyltrimethyl-ammonium hydroxide (a strong organic base) by reacting with an alkali in aqueous solution.

### Bis-(5-methoxy-2-ethylbenzoxazole-1)-carbocyanin Bromide

**Photographic**—Sensitizer (U.S. 2072908) in photographic emulsion.

### 2:3-Butyleneglycol

**Chemical**—Replacer of other glycols where its modified properties offer an advantage.

**Rubber**—Starting point in making butadiene.

### Butylphenolacetylene (Tertiary) Condensate

**(Koresin)**

**Paint, Varnish, and Lacquer**—New material suggested for use in varnishes: color, tan-brown; melting range, 115-130°C; soluble in hydrocarbons, drying oils, ketones, esters.

### 3-Chlor-4-beta-2':4':6'-trichlorophenoxyethoxydiphenyl

**Adhesives**—Plasticizer (U.S. 2248491) in adhesive compositions.

**Ceramic**—Plasticizer (U.S. 2248491) in coating compositions used for protecting and decorating ceramic products.

**Cosmetic**—Plasticizer (U.S. 2248491) in nail enamels and lacquers.

**Electrical**—Plasticizer (U.S. 2248491) in insulating compositions used for covering wire and in making electrical machinery and equipment.

**Glass**—Plasticizer (U.S. 2248491) in coatings for protecting and decorating glassware.

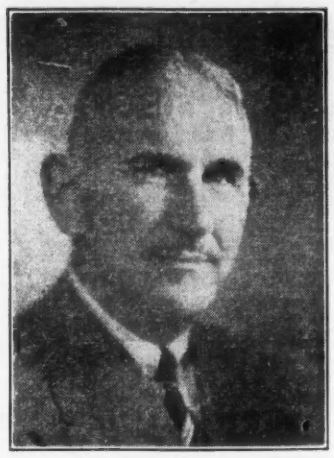
**Leather**—Plasticizer (U.S. 2248491) in compositions used in the manufacture of artificial leathers and as coatings for protecting and decorating leathers and leather goods.

**Metal-Fabricating** — Plasticizer (U.S. 2248491) in coating compositions used for protecting and decorating metallic articles.

**Miscellaneous** — Plasticizer (U.S.

—*Continued on page 60*

# *Elected as Vice-Presidents of National Lead*



D.A. Merson (left) and Harry C. Wildner have been elected vice-presidents of the National Lead Company, New York. Mr. Merson has been manager of sales in charge of paints, oils and pigments, and Mr. Wildner has been comptroller of the company since 1946. Both are directors and members of the executive committee. Also announced was the retirement on July 1 of the company's secretary, Henry O. Bates, who has been with National Lead since 1902. He will be succeeded by John B. Henrich, now assistant secretary. Thomas F. Owens will replace Mr. Henrich.

## AEC Plans Lab In New Jersey

The Atomic Energy Commission will establish a chemical laboratory in New Brunswick, N. J., to provide precise analytical quality control of special materials used in the national atomic energy program, Wilbur E. Kelley, manager of New York directed operations of AEC, announced last Friday.

The announcement followed acquisition by the government of an option on property and a building for the laboratory in New Brunswick. The laboratory, when completed, will represent an investment of over $1,000,000 and will require the services of about sixty-five scientific and technical personnel and about eighteen clerical and administrative workers.

Operations under the New York office include the processing of uranium, beryllium and other ores and materials of importance in the development of atomic energy.

## Coal-Burning Experiments Approved by Interior Dept.

The Department of the Interior has awarded a contract for a second experiment with burning coal underground. The Alabama Power Company, which performed the first experiment of this type last year, has contributed 300 acres of coal for the project, which will be conducted at Gorgas, Fla. The previous test is said to have shown that burning unmined coal is a potential source of fuel and of raw materials for synthetic liquid fuels.

## Dental Research Institute Establishment Approved

President Truman signed the dental research bill, H.R. 6726, into law last Thursday. The bill establishes a National Institute of Dental Research in the United States Public Health Service to make studies relating to the causes and treatment of dental diseases and to foster such researches by public and private agencies. One of the first projects undertaken will be a study on the use of fluorine to prevent decay.

## Surface Chemistry Session Set for Cleveland Sept. 25

Surface chemistry in various aspects will be covered at the fourth annual symposium sponsored jointly by the Cleveland sections of the American Chemical Society, American Institute of Chemical Engineers and Electrochemical Society, to be held in the Carter hotel, Cleveland, on September 25.

Papers to be presented at the morning session include "Crystal Structure and Surface Behavior," by Dr. A. T. Gwathmey, University of Virginia; "Development and Trends in Industrial Catalysts," by Dr. James H. Boyd, New York consultant, and "Surface Reactions of Magnesium as an Anodic Material," by W. S. Loose, director of the laboratory development division of the magnesium laboratories of Dow Chemical Company, Midland, Mich.

Papers to be presented at the afternoon session will include "Phosphate Coating of Metal," by V. M. Darsey, president of the Parker Rust Proof Company; "Principles of Powder Metallurgy," by H. C. Miller, vice-president of Charles Hardy, Inc., and "New Developments in Organosols and Plasticols," by C. W. Patten, manager of the coating and adhesive materials division of the thermoplastics department of the Bakelite Corporation.

## Dr. Dumez Awarded 1948 Remington Medal

Dr. Andrew G. Dumez, of Baltimore, Md., secretary of the American Council on Pharmaceutical Education and dean of the University of Maryland School of Pharmacy, has been named the twenty-sixth recipient of the Remington medal by the New York branch of the American Pharmaceutical Association.

In announcing selection of Dr. Dumez, the committee on award indicated that this distinction will be conferred "specifically as a recognition of his services as secretary of the American Council on Pharmaceutical Education," although "his general prominence in the fields of education and research also qualify him as a recipient of the medal." The award presentation ceremonies are expected to be held in New York in the fall.

# *Association Meeting Dates*

American Association of Textile Chemists and Colorists, Augusta, Ga., October 21-23.
American Chemical Society, national meeting, eastern session, Washington, August 30-September 3; midwest session, St. Louis, Mo., September 6-10; western session, Portland, Ore., September 13-17.
American Institute of Chemical Engineers, Pennsylvania hotel, New York, November 7-10.
American Mining Congress, San Francisco, September 20-25.
American Oil Chemists Society, Pennsylvania hotel, New York, November 15-18.
American Pharmaceutical Association, San Francisco, Calif., August 8-14.
American Society of Hospital Pharmacists, San Francisco, August 8.
American Soybean Association, Peabody hotel, Memphis, Tenn., September 13-15.
Association of Consulting Chemists and Chemical Engineers, Sheraton hotel, New York, October 26.
Drug, Chemical and Allied Trades Section of New York Board of Trade, Shawnee Inn, Shawnee, Pa., September 24.
Federal Wholesale Druggists Association, Haddon Hall, Atlantic City, N. J., October 6-8.
Federation of Paint and Varnish Production Clubs, Congress hotel, Chicago, November 4-6.
International Congress of Industrial Chemistry, Brussels, Belgium, September.
National Association of Insecticide and Disinfectant Manufacturers, Commodore hotel, New York, December 6-7.
National Paint, Varnish and Lacquer Association, Congress hotel, Chicago, November 8-10.
National Petroleum Association, Traymore hotel, Atlantic City, N. J., September 15-17.
National Plastics Exhibition, Grand Central Palace, New York, September 27-October 2.
National Wholesale Druggists Association, Palmer House, Chicago, October 17-20.
Society of Chemical Industry, Edinburgh, Scotland, July 12-17.
Tanners Council of America, Leather Show, Waldorf-Astoria hotel, New York, September 14-15.

## SOCMA Discusses Statistical Reports

The monthly meeting of the Synthetic Organic Chemical Manufacturers Association in the Commodore hotel, New York, brought out an attendance of sixty-three. Dr. Elvin H. Kilheffer, of the du Pont company, who is serving as president of the association for the remainder of the term of the late Ralph E. Dorland, presided at the meeting. J. P. Remensnyder, of the Heyden Chemical Corporation, reported as chairman of the membership committee that the Reilly Tar & Chemical Corporation had been elected to membership in the association and that the applications of three other firms were being considered and would be acted on shortly.

P. K. Lawrence, of the du Pont company, who is serving as chairman of a special committee on the Bureau of the Budget, discussed proposed revisions of industry statistical reports to the Tariff Commission. He suggested a poll of the membership of the association to learn their wishes regarding possible elimination of statistics now reported on a monthly basis. With regard to annual figures, the speaker described a rather drastic paring down process that had been accomplished on some of the longer questionnaires and expressed the belief that if all annual statistics were received by April 1, 1949, a complete annual report could then be expected by September 1, 1949.

Otto Kinzel, of the Carbide & Carbon Chemical Corporation, reported the recommendation of the Commerce and Industry Association of New York for elimination of the six-hour notice of intent in connection with tariff drawbacks. John Lurch, attorney for the association, discussed the above recommendation and also commented on the trade agreements act.

## DCAT Names Committee Chairmen for Meeting

Robert B. Magnus, of Magnus, Mabee & Reynard, essential oils, has been named general committee chairman for the fifty-eighth annual meeting of the Drug, Chemical and Allied Trades section of the New York Board of Trade, to be held at Shawnee Inn., Shawnee-on-Delaware, Pa., on September 24 and 25. Committee chairmen are as follows:—

Get acquainted party, Clark L. Rodgers, Owens-Illinois Glass Company; Friday night party, Charles P. Walker jr., Citro Chemical Company; Saturday night banquet and installation of officers, Lloyd I. Volckening, The Ivers-Lee Company; golf, Harold C. Green, L. Sonneborn Sons, Inc.; ladies' golf, Mrs. Volckening; ladies' entertainment, Charles M. Macauley, Prophy-lac-tic Brush Company; business program, Carle M. Bigelow, Calco Chemical division of American Cyanamid Company; publicity, John W. McPherrin, "American Druggist"; reception, John P. Remensnyder, Heyden Chemical Corporation, and transportation, Francis J. Reid, New York Quinine & Chemical Works.

## Monsanto Inaugurates New Training Program

Monsanto Chemical Company, St. Louis, Mo., has inaugurated a program which will permit university and college faculty members in chemical engineering to gain a full year of on-the-job training in the chemical industry.

Teachers chosen for participation in the program will be paid the salary ordinarily paid for comparable jobs within the company, and their moving expenses to and from the plant to which they are assigned will be paid.

First teacher to receive the benefits of the plan will be Robert V. Andrews, assistant professor in the department of chemical engineering, Agricultural and Mechanical College of Texas. Mr. Andrews will join the company on September 1 for a year's service at its Anniston, Ala., plant.

## Entomology Congress Set For Stockholm Aug. 8-14

Dr. Percy N. Annand, chief of the bureau of entomology and plant quarantine of the Department of Agriculture, has been named chairman of the United States delegation to the eighth International Congress of Entomology, to be held in Stockholm, Sweden on August 8 to 14.

The congress, one in a triennial series which held its last meeting at Berlin in 1938, has as its main purpose the study and investigation of methods for preventing the spread of noxious insects.

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# Current Market Quotations

## Chemicals and Related Materials

### June 25, 1948

**Unless otherwise indicated, listings are first-hand quotations on large lots, f.o.b. New York. Changes and trends are noted in the market reports, with other informative comment. The locations of these reports are given in the table of contents on page 4.**

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## A

**Acacia (see Gum, arabic)**

| | | | |
|---|---|---|---|
| **Acetaldehyde, 99%, dms., 55 gals., works** | lb. | 11½- | 12 |
| 5 and 10 gals., works | lb. | 12 - | .16 |
| tanks, works | lb | 09½- | .10½ |
| **Acetaldiol (see Aldol).** | | | |
| **Acetamide, CP, fib. dms** | lb. | 65 - | 75 |
| tech., fib. dms | lb. | 38 - | 43 |
| **Acetanilide, tech., bbls., c.l.** | lb. | 22 - | — |
| l.c.l. | lb. | 25 - | 26 |
| kgs. | lb. | 28 - | — |
| USP, bbls., 2,000-lb. lots | lb. | .40 - | .50 |
| smaller lots | lb. | .44 - | .56 |
| **Acetic anhydride dms., c.l., frt. all. E.** | lb | 13½- | — |
| l.c.l., frt. alld. E | lb. | .15 - | — |
| tanks frt. alld E | lb | 12 - | — |
| **Acetoacetanilide, fib. dms., works** | lb. | .65 - | — |
| bbls., works | lb | 67½- | — |
| **Acetoacetorthotoluidide, bbls., works** | lb. | .90 - | — |
| fib. dms., works | lb. | .69 - | — |
| **Acetoacetorthochloroanilide, bbls., works** | lb. | 1.02 - | — |
| fib. dms., works | lb. | 1.15 - | — |
| **Acetone, CP, dms., c.l., dlvd** | lb. | .09½- | .10 |
| l.c.l., dlvd | lb. | .10½- | .11 |
| tanks, dlvd | lb. | 08 - | 08¼ |
| Methyl (see M). | | | |
| **Acetonitrile, dms., c.l., works** | lb. | 45 - | — |
| l.c.l., works | | 50 - | — |
| smaller containers, works | lb. | 55 - | 60 |
| **Acetophenetidin, USP, bbls., works, frt. equald** | lb. | 1.10 - | 1.20 |
| **Acetophenone cns., dms** | lb. | 1.50 - | 1.55 |
| **Acetyl chloride cbys., works** | lb. | .55 - | .60 |
| **Acetyltributyl citrate, dms** | lb. | .42 - | .45 |
| smaller pkgs. | lb. | .48 - | .54 |
| **Acetyltriethyl citrate, dms** | lb. | .36 - | .38 |
| smaller pkgs. | lb. | .41 - | .47 |
| **Acid, abietic, dms., c.l., works** | lb | 07½- | — |
| **Acetic, glacial or redist., 28% bbls.** | 100 lbs. | 3.78 - | 4.08 |
| 60% bbls. | 100 lbs. | 7.56 - | 7.81 |
| 70% bbls. | 100 lbs. | 9.45 - | 9.70 |
| 80% bbls. | 100 lbs. | 10.80 - | 11.05 |
| glacial, synthetic, C.P., dms., works | 100 lbs. | 13.50 - | 14.00 |
| USP, dms., works | 100 lbs. | 11.50 - | 12.00 |
| tech., dms., c.l., works | 100 lbs. | 10.67 - | 11.00 |
| tanks, works | 100 lbs. | 8.00 - | 8.62 |

Acetic acid price ranges above are c.l. and l.c.l. quantities. Carboys and cases are 50c. per 100 lbs. higher.

**Acetic anhydride (see Acetic anhydride above).**

| | | | |
|---|---|---|---|
| **Acetylsalicylic, USP, special, bbls., makers primary distrib., point of ship't, 100 lb. lots** | lb. | 50 - | — |
| smaller lots | lb. | .61 - | 64 |
| standard, fine, cryst., gran. (30-40 mesh) powd (80 mesh), bbls., same basis | lb. | 45 - | 59 |

Freight equalized, shipment identical quantity over standard routes, from N. Y., Phila., Midland, Mich., Chicago and St. Louis.

| | | | |
|---|---|---|---|
| **Aminoacetic, NF, bbls., frt adjusted.** | lb. | 1.50 - | 1.75 |
| **Anthranilic, resub., bbls** | lb. | 2.00 - | — |
| tech., bbls. | lb. | 1.05 - | 1.10 |
| **Arsenous, tech. (see Arsenic, white).** | | | |
| **USP, powd., dms., kgs** | lb. | 20 - | .22 |
| **Ascorbic, USP, dms., 500-kilo lots** | kilo. | 24.50 - | — |
| 25-50 kilo lots | kilo. | 25.00 - | — |
| 10-kilo lots | kilo. | 25.35 - | — |
| 5-kilo lots | kilo. | 25.70 - | — |
| bots., kilo lots | kilo. | 26.41 - | — |
| 500 grams | kilo | 27.47 - | — |
| **Battery, cbys., c.l., E. works** | 100 lbs. | 1.60 - | 1.75 |
| l.c.l., E. works | 100 lbs. | 2.05 - | 2.75 |
| **Benzoic, tech., bbls., 4,000 lbs. or more** | lb. | 42 - | — |
| 1,000 to 3,900 lbs | lb. | 44 - | — |
| 900 lbs. or less | lb. | .47 - | — |
| **USP, bbls., 4,000 lbs. up** | lb. | 54 - | — |
| 1,000 to 3,900 lbs | lb. | .55 - | — |
| 900 lbs. or less | lb. | .58 - | .59 |
| **dms., 4,000 lbs. up** | lb. | .55 - | .56 |
| 1,000 to 3,900 lbs | lb. | .56 - | .57 |
| 900 lbs. or less | lb. | .58 - | .59 |
| **Benzoxynaphthoic, bbls., works** | lb. | 1.25 - | 1.43 |
| **Boric, tech., 99.5%, cryst., paper bgs., c.l., frt. split** | ton. | 124.00 - | — |
| ton lots, ex whse | ton. | 144.80 - | — |
| less than ton lots, ex whse. | ton. | 149 70 - | — |
| powd., paper bgs., c.l., frt. split | ton. | 104 00 - | — |
| ton lots, ex whse. N. Y. or Chi. | ton. | 124.80 - | 125.00 |
| less ton lots, same basis | ton. | 129.70 - | 130.00 |
| bbls., c.l., frt. split | ton. | 124.00 - | — |
| ton lots, ex whse. N. Y. or Chi. | ton. | 144 70 - | 145.00 |
| less car lots, same basis | ton. | 149 70 - | 150.00 |
| gran., bulk | ton. | 95.50 - | — |
| paper bgs., c.l., frt. split | ton. | 99 00 - | — |
| ton lots, ex whse., N. Y. or Chi. | ton. | 119 70 - | 120.00 |
| less ton lots, same basis | ton. | 124.80 - | 125.00 |
| bbls., c.l., frt. split | ton. | 119.00 - | — |
| ton lots, ex whse., N. Y. or Chi. | ton. | 139.70 - | 140.00 |
| less ton lots, same basis | ton. | 144 70 - | 145.00 |
| **USP $25 per ton higher.** | | | |
| **Brenner's, bbls.** | lb. | 1.31 - | — |
| **Butyric, 99%, dms., c.l., works** | lb. | 51 - | — |
| l.c.l., works | | 55 - | — |
| tankcars, works | | 52 - | — |
| **Cacodylic, bots.** | lb. | 12.00 - | 13.00 |
| **Camphoric, natural, dms** | lb. | 6.00 - | 6.75 |
| synth., dms. | | 5.50 - | 6.00 |
| **Caprie, tech., dms** | lb. | 50 - | .50½ |
| **Caprylic, 99%, dms** | lb | 50 - | .50½ |
| **Castor oil, split, dms** | lb. | 33½- | .36½ |
| **Chlorosulphonic, dms., c.l., works** | lb. | 03 - | — |
| l.c.l., works | lb | 02½- | .04½ |
| tanks, works | lb. | 02½- | — |
| **Acid, chromic, 99½-99¾%, dms., c.l., works** | lb. | .22½- | — |
| l.c.l., works | lb. | .24 - | .25 |
| **Cinnamic, refd., bots** | lb. | 3.00 - | 4.00 |
| **Citric, anhyd., gran., fine gran., bbls.** | lb. | .25 - | — |
| dms., c.l. | lb. | .24 - | — |
| 10,000 lbs., 1 ship't | lb. | 24½- | — |
| kgs. | lb. | 25½- | — |
| **Anhydrous citric acid powder, ½c. per lb. higher.** | | | |
| **USP, cryst., bbls., c.l.** | lb. | .25 - | — |
| 10,000 lbs., 1 ship't | lb. | 25½- | — |
| smaller lots | lb. | .26 - | — |
| **kgs.** | lb. | 26½- | — |
| **gran., fine gran., bbls., c.l.** | lb. | .22 - | — |
| 10,000 lbs., 1 ship't | lb. | 22½- | — |
| smaller lots | lb. | .23 - | — |
| kgs. | lb. | 23½- | — |
| **USP citric acid powder ½c. per lb. higher.** | | | |
| **Cleve's, bbls., mixed** | lb. | .61 - | .65 |
| **Coconut oil, dist., dms** | lb. | .32 - | .34 |
| **Corn oil, s.d., dms** | lb. | .20¾- | .21¾ |
| **Cottonseed oil, dist., dms** | lb. | .20¾- | .21¾ |
| **Cresylic, dom., coal tar, high-boil 50% (210°-215°), low boil 50% (204°-206°), and special blends, dms., c.l., works frt equald.** | gal. | 1.61 - | — |
| l.c.l., same basis | gal. | 1.64 - | — |
| tanks, same basis | gal. | 1.55 - | — |
| **Petroleum, 185° C to 205° C, non-ret. dms., c.l., San Francisco and Los Angeles** | gal. | 1.005 - | — |
| l.c.l., same basis | gal. | 1.025 - | 1.045 |
| tanks, same basis | gal. | .925 - | — |
| **190° C to 220° C, non-ret. dms., c.l., San Francisco and Los Angeles** | gal. | .93 - | — |
| l.c.l., same basis | gal. | .95 - | .97 |
| tanks, same basis | gal. | .85 - | — |
| **210° C to 240° C, non-ret. dms., c.l., San Francisco and Los Angeles** | gal. | .745 - | — |
| l.c.l., same basis | gal. | .765 - | .785 |
| tanks, same basis | gal. | .665 - | — |
| **255° C to 271° C, non-ret. dms., c.l., San Francisco and Los Angeles** | gal. | .62 - | — |
| l.c.l., same basis | gal. | .72 - | .74 |
| tanks, same basis | gal. | .62 - | — |
| **Crotonic, bbls., Canadian, works** | lb. | 85 - | — |
| **Dichlorophenoxyacetic fib. dms., c.l., works, frt. equald** | lb. | 75 - | — |
| l.c.l. same basis | lb. | .83 - | 90 |
| **Diethylbarbituric (see Barbital)** | | | |
| **F, bbls., works** | lb. | 1.73 - | 1.78 |
| **Folic, bots.** | gram. | 2.00 - | — |
| **Formic, 85% cbys., c.l., works** | lb. | .12 - | .13 |
| l.c.l., works | lb. | .12½- | .14½ |
| **90% cbys., c.l., works** | lb. | .12½- | .13½ |
| l.c.l., works | lb. | .13 - | .14½ |
| **Fumaric, tech., bbls., dms** | lb. | .27 - | .28 |
| **Gallic, NF V, bbls., 1,000-lb. lots** | lb. | 1.40 - | — |
| smaller lots | lb. | 1.43 - | 1.45 |
| **technical, bbls., 1,000-lb. lots** | lb. | 1.23 - | — |
| smaller lots | lb. | 1.26 - | 1.28 |
| **Gamma, bbls.** | lb. | 1.13 - | 1.20 |
| **Gluconic, tech., 50% bots** | lb. | .28 - | .31 |
| dms. | lb. | .14 - | — |
| kgs. | lb. | .16 - | — |
| **Glycolic (see Acid, hydroxyacetic).** | | | |
| **H, 100% basis, bbls., wgks** | lb. | .66 - | — |
| **Hydriodic, 45-47%, cbys** | lb. | 2.52 - | 2.54 |
| 57% cbys. | lb. | 2.83 - | 2.85 |
| **Hydrobromic, medicinal, 48% cbys., dlvd. E.** | lb. | .43 - | — |
| tech., 48% cbys., dlvd E | lb. | .45 - | — |
| 34% cbys., dlvd. E | lb. | .35 - | .37 |
| **Hydrochloric (see Acid, muriatic).** | | | |
| **Hydrocyanic, cyls., works** | lb. | .80 - | 1.00 |
| dilute, NF, 2% 5-lb bots | lb. | .30 - | .40 |
| **Hydrofluoric, anhyd., cyls., works** | lb. | .19 - | .19½ |
| tanks, works | lb. | .16 - | — |
| 30%, steel dms., works | lb. | 09 - | — |
| 48%, steel dms., works | lb. | .12 - | — |
| 52%, steel dms., works | lb. | 12½- | — |
| 60%, steel dms., works | lb. | 18½- | — |
| 70%, steel dms., works | lb. | .15 - | — |
| **Hydrofluosilicic, 30-35%, bbls** | lb. | 08 - | .09 |
| **Hydroxyacetic, tech., 70%, bbls., non-return., Phila** | lb. | 084 - | — |
| tanks, Belle, W. Va., 100% basis | lb. | 083 - | — |
| **Hypophosphorous, USP, dms** | lb. | .75 - | .77 |
| **J, bbls., works, 20% basis** | lb. | 2.64 - | 2.66 |
| **L, bbls., works** | lb. | .80 - | .95 |
| **Lactic, edible, 50%, bbls., 20 or more.** | lb. | .16 - | — |
| smaller lots | lb. | .16½- | .17 |
| 80%, bbls., 5 or less | lb. | .24¼- | .24¾ |
| plastic grade, 50%, bbls., 20 or more. | lb. | .17¾- | — |
| 10 or less | lb. | .18¾- | — |
| 80%, bbls., 5 or less | lb. | 31¾- | .32½ |
| **tech., 22% bbls., c.l., works** | 100 lbs. | 4.40 - | — |
| l.c.l., works | 100 lbs. | 4.80 - | — |
| cbys., works | 100 lbs. | 5.30 - | — |
| **44% bbls., c.l., works** | 100 lbs. | 8.15 - | — |
| l.c.l., bbls., works | 100 lbs. | 8.55 - | — |
| cbys., works | 100 lbs. | 9.05 - | — |
| **USP XII, 85% cbys** | lb. | .54 - | .57 |
| **USP VIII, 75% cbys** | lb. | .52 - | .59 |
| **Laurent's, bbls.** | lb. | .80 - | — |
| **Lauric, dist., 85-90% dms** | lb. | .40 - | .40½ |
| 60% dms. | lb. | .35 - | .35½ |
| **Linseed oil, raw dist., dms** | lb. | 3200- | .3250 |
| water white, dms | lb. | 3500- | .3550 |
| **Maleic, powd., dms** | lb. | 20 - | .30 |
| Anhydride (see M). | | | |
| **Malic, powd., kgs** | lb. | 47 - | — |
| **Mandelic, NF, dms., 1,000-lb. lots** | lb. | 1.85 - | — |
| smaller lots | lb. | 1.90 - | 2.10 |
| **Mixed, tanks, nitric unit** | lb. | .05 - | 06 |
| sulphonic unit | lb. | 0085- | .009 |
| **Molybdic, kgs., works** | lb | 95 - | 1.10 |
| **Monochloroacetic, purified, flake, 99% dms** | lb. | .26 - | .27 |
| tech., flake, 96-97% bbls | lb. | 21½- | .23½ |
| **Monosulphonic, bbls.** | lb. | 1.60 - | — |
| **Acid, muriatic, 18°, cbys., c.l., E. works** | 100 lbs. | 1.50 - | 1.70 |
| l.c.l., E. works | 100 lbs. | 1.90 - | 2.90 |
| tanks, E. works | ton. | 18.00 - | 18.20 |
| **20°, cbys., c.l., E. works** | 100 lbs. | 1.85 - | 2.00 |
| tanks, E. works | ton. | 20.00 - | 21.00 |
| **22°, cbys., c.l., E. works** | 100 lbs | 2.35 - | 2.50 |
| tanks, E. works | ton. | 22.00 - | 26.00 |
| **CP, USP, consumers, cbys., extra** | lb. | .08 - | — |
| 6-lb bots., extra | lb. | 10 - | — |
| dealers, cbys., extra | lb. | 06½- | — |
| 6-lb bots., extra | lb. | 08½- | — |
| **Myristic, dist., dms** | lb. | .45 | Nom. |
| **Naphthenic, 220-230 acidity, dms., works** | lb. | 15 - | — |
| tanks, works | | 12 - | — |
| **230-240 acidity, dms., works** | lb. | 20 - | — |
| tanks, works | lb. | 17 - | — |
| **Naphthol(1)-4-sulphonic (see Acid, Neville and Winther's).** | | | |
| **Naphthol(1)-5-sulphonic (see Acid L).** | | | |
| **Naphthol(1)-5-sulphonic,8-amino (see Acid, S).** | | | |
| **Naphthol(1)-3,6, disulphonic,8-amino (see Acid, H).** | | | |
| **Naphthol(2)-6,8-disulphonic (see Acid, Gamma).** | | | |
| **(2)-7-Sulphonic,2-amino (see Acid J).** | | | |
| **Naphtholsulphonic, mixed (see Acid, Cleve's, mixed).** | | | |
| **Naphthylamine(1)-5-sulphonic (see Acid, Laurents).** | | | |
| **(2)-6-sulphonic (see Acid, Broener's).** | | | |
| **(2)-7-sulphonic (see Acid F).** | | | |
| **(2)-1-sulphonic (see Acid, Tobias).** | | | |
| **Neville and Winthers, dms** | lb. | .80 - | .84 |
| **Nicotine, USP, dms., works** | kilo. | 7.00 - | 7.30 |
| **Nicotinic amide (see Nicotinamide).** | | | |
| **Nitric, 36° cbys., c.l., E. works** | 100 lbs. | 5.00 - | — |
| l.c.l., E. works | 100 lbs. | 5.25 - | 5.95 |
| **38°, cbys., c.l., E. works** | 100 lbs | 5.50 - | — |
| l.c.l., E. works | 100 lbs | 5.75 - | 6.45 |
| **40°, cbys., c.l., E. works** | 100 lbs. | 6.00 - | 6.50 |
| l.c.l., E. works | 100 lbs. | 6.25 - | 6.95 |
| **42°, cbys., c.l., E. works** | 100 lbs | 6.50 - | 7.00 |
| l.c.l., E. works | 100 lbs. | 6.75 - | 7.45 |
| **CP, USP, consumers, cbys., extra** | lb. | 13 - | — |
| 7 lb bots., ca., extra | lb. | 15 - | — |
| dealers, cbys., extra | lb. | 11½- | — |
| 7-lb. bots., ca., extra | lb. | 13½- | — |
| **Oleic (see Oil, red)** | | | |
| **Oleum (see Acid, sulphuric, fuming)** | | | |
| **Orthoresotinic, dms., c.l., works** | lb. | 67 - | — |
| l.c.l. works | lb. | 69 - | — |
| **Oxalic, bbls., c.l., works** | lb. | 13¼- | 14 |
| 10,000 lbs., works | lb. | 13½- | 14¼ |
| smaller lots, works | lb. | 14½- | 15¼ |
| **Palm oil, white, dist., dms** | lb. | 21¼- | 21¾ |
| **Para-aminobenzoic, purified, dms., works** | lb | 4.00 - | — |
| technical, bbls., works | lb. | 1.70 - | — |
| **Paramethylphenylcinchonic (see Neocinchophen).** | | | |
| **Paranitrobenzoic, cns.** | lb | 80 - | — |
| **Paratoluidinmethanesulphonic, bbls., wks.** | lb. | 92 - | .95 |
| **Peanut oil, s.d., dms** | lb. | .20¾ | Nom. |
| **Perchloric, 60% cbys, works** | lb. | 58 - | 62 |
| 70-72%, cbys., works | lb. | 61 - | .66 |
| **Phenylacetic, bots** | lb | 1.51 - | 1.75 |
| **Phenylglycollic (see Cinchophen).** | | | |
| **Phenylglycollic (see Acid, mandelic).** | | | |
| **Phosphoric, food grade, 50%, bbls., c.l., works, frt. equald** | 100 lbs. | 4.50 - | — |
| l.c.l., same basis | 100 lbs. | 5.25 - | 6.00 |
| **cbys., c.l., works, frt. equald** | 100 lbs. | 5.06 - | — |
| l.c.l., works, frt. alld. | 100 lbs. | 6.00 - | 7.50 |
| 75%, bbls., c.l., works, frt. equald | 100 lbs. | 5.75 - | — |
| l.c.l. | lb. | 11½- | 13 |
| **dilute, 10% cbys., dms** | lb. | 07 - | 07½ |
| **cbys., c.l. works, frt. equald** | 100 lbs. | 6.10 - | — |
| l.c.l., works, frt. alld. | 100 lbs | 8.00 - | 9.00 |
| tanks, works, frt. equald | 100 lbs. | 4.60 - | — |
| NF, 85%, cbys., c.l. | lb. | 10½- | — |
| **Picramic, bgs** | lb. | 65 - | .70 |
| **Picric, bbls** | lb. | 30 - | .31 |
| **Prodonic, nat., dms., works** | lb. | 18 - | — |
| tanks, works | lb. | 17 - | — |
| synth., pure, dms., works | lb. | 22 - | — |
| tanks, works | lb. | 21 - | — |
| **Pyrogallic, tech., bbls** | lb. | No prices | |
| N.F., cryst., dms | lb. | 2.80 - | 3.03 |
| resub., dms | lb. | 3.30 - | 3.45 |
| **Pyroligneous, bbls., incl., l.c.l., ex whse.** | gal. | 43 - | — |
| **Ricinoleate (see Acid, castor oil, sulph).** | | | |
| **S, bbls., works** | lb. | 2.75 - | 2.79 |
| **Salicylic, tech., bbls., c.l.** | lb. | 31 - | — |
| smaller lots | | 38 - | — |
| USP, bbls., c.l. | lb. | 40 - | — |
| smaller lots | lb. | 47 - | — |
| **Schaefic, tech., dms., c.l., works** | lb. | 68 - | — |
| l.c.l., works | lb. | 70 - | 72 |
| **Soybean oil, s.d., c.l., works** | lb. | .20¾- | .21¾ |
| **Stearic, double pressed, bgs** | lb. | .32½- | 33 |
| single pressed, bgs | lb. | .32 - | .32½ |
| triple pressed, bgs | lb. | .31½- | .35¾ |
| **Succinic, bbls** | lb. | .87 - | .90 |
| **Sulphanilic, CP, bots., works** | lb | 1.60 - | 1.63 |
| tech., dms., works | lb. | 17 - | — |
| **Sulphuric, 60° cbys., c.l., E works** | 100 lbs. | 1.25 - | — |
| l.c.l., E. works | 100 lbs | 1.50 - | 2.20 |
| tanks, E. works | ton. | 12.25 - | — |
| **66°, cbys., c.l., E works** | 100 lbs | 1.50 - | — |
| l.c.l., E works | 100 lbs | 1.75 - | 2.45 |
| tanks, E. works | ton. | 15.00 - | — |
| **98%, tanks, E. works** | ton. | 16.00 - | — |
| **CP, N.F., consumers cbys., extra** | lb. | 08 - | — |
| 9-lb bots., cs., extra | lb. | 10 - | — |
| dealers, cbys., extra | lb. | 06½- | — |
| **9-lb bots cs., extra** | lb. | 08½- | — |
| **fuming, 20%, tanks, E. works** | ton. | 18.00 - | — |
| **Tallow, dist., dms** | lb. | .23¾- | 24¼ |



| | | | |
|---|---|---|---|
| **Acid, tannic, tech., 60-62%, dms** | lb. | .68 - | .69 |
| 70-72%, dms. | lb. | .80 - | .85 |
| 75-76%, dms. | lb. | .86 - | .90 |
| **USP, fluffy, bbls., 1,000-lb. lots** | lb. | 1.45 - | — |
| smaller lots | lb | 1.47 - | 1.55 |
| powder, bbls., 1,000 lb. lots | lb. | 1.35 - | — |
| smaller lots | lb. | 1.20 - | 1.50 |
| **Tartaric, USP, bbls., 10,000 lbs., 1 ship't** | lb. | 41½- | — |
| smaller lots | lb. | 42 - | — |
| dms | lb. | 44 - | 45 |
| kgs. | lb. | 42½- | — |
| **Thioglycolic, refined, bbls., cbys., basis 100%** | lb. | 1.95 - | 2.00 |
| tech., bbls., cbys., basis 100% | lb. | 1.40 - | — |
| **Tobias, bbls.** | lb. | .65 - | — |
| **Trichloroacetic, bots** | lb. | 2.00 - | 2.50 |
| **Toluenesulphonic, dms., works** | lb | .20 - | — |
| **Tungstic, tech., 100-lb. pkgs** | lb. | 2.65 - | — |
| **Aconite leaves, bls.** | lb | 60 - | 65 |
| Root, bls. | lb. | .80 - | .85 |
| **Aconitine, amorph., mild, bots** | oz. | 72.25 - | 72.50 |
| cryst., potent, bots | oz. | 85.00 - | — |
| **Acrylonitrile, dms., c.l., works** | lb. | 30½- | — |
| l.c.l., works | lb. | .31 - | 42 |
| tanks, works | lb. | 29½- | — |
| **Adeps lanae (see Lanolin).** | | | |
| **Adonis vernalis herb, bls** | lb. | .40 - | .45 |
| **Agar** | lb. | 3.15 - | 3.25 |
| **Agaric, white, bls** | lb. | 2.00 - | 2.25 |
| **Agrimony herb, bls** | lb. | .40 - | 45 |
| **Albumen (egg), edible, flake, bbls** | lb. | 2.62 - | 2.75 |
| powd., bbls. | lb. | 2.67 - | 2.80 |
| tech., cryst., bbls | lb. | 1.55 - | 1.65 |
| **Albumin, blood dark (see Blood, dried, soluble)** | | | |
| light, dms., l.c.l. | lb. | .70 - | .78 |
| Egg (see Albumen). | | | |
| **Alcohol, allyl, dms., c.l., dlvd** | lb | 26½- | — |
| l.c.l., dlvd | lb. | 27½- | — |
| tanks, dlvd | lb. | 25 - | — |
| **Amyl, ex pentane, dms., c.l., frt. alld E of Miss.** | lb. | 18 - | — |
| l.c.l., frt. alld E of Miss | lb. | 19 - | — |
| tanks, frt. alld E of Miss | lb. | .17 - | — |
| (see also Fusel oil, ref.) | | | |
| **Benzyl, cns** | lb. | 72 - | 80 |
| dms. | lb. | 68 - | 88 |
| **Butyl, normal, ferment. fil., Ind. prod., dms., c.l., frt. alld** | lb. | .33 - | — |
| l.c.l., frt. alld. E | lb. | .34 - | — |
| tanks, frt. alld. E | lb. | 31½- | — |
| tankwagon, frt. alld. E | lb. | .32 - | — |
| other production, dms., c.l., frt. alld E. | lb. | .33 - | — |
| l.c.l., frt. alld. E | lb. | .34 - | — |
| tanks, frt. alld. E | lb. | 31½- | — |
| synthetic dms., c.l., frt. alld. E. | lb. | .19 - | — |
| l.c.l., frt. alld. E | lb. | .20 - | — |
| tanks, frt. alld. E | lb. | 17½- | — |

Normal synthetic butyl alcohol prices in West .01c. per lb. higher.

| | | | |
|---|---|---|---|
| **secondary, dms., c.l., dlvd** | lb. | 12 - | 13½ |
| l.c.l., dlvd | lb. | 12½- | 14 |
| tanks, dlvd | lb. | 10½- | 12 |
| **tertiary, dms., c.l.** | lb. | 13½- | — |
| l.c.l., dms. | lb. | 14 - | — |
| tanks | lb. | 12 - | — |
| **Capryl, dms., c.l., works** | lb. | 26 - | — |
| l.c.l., works | lb. | 27 - | — |
| tanks, works | lb. | 24½- | — |
| **Cetyl, dom., CP., fiber cns., 1,000 lbs.** | lb. | 2.25 - | — |
| smaller lots | lb. | 2.50 - | 2.55 |
| **Cinnamic, bots.** | lb. | 2.80 - | 3.35 |
| **Denatured, CD 12, CD13, CD14, dms., dlvd. E. of Miss. R.** | gal. | .91½- | — |
| l.c.l., dlvd. E. of Miss. R. | gal. | .95½- | 1.00½ |
| tanks, dlvd. E. of Miss. R. | gal. | .84½- | — |

Tankcar sales require written authorization by Alcohol Tax Unit.

| | | | |
|---|---|---|---|
| **SD1, 190 pf., dms., c.l., dlvd. E of Miss. R.** | gal. | .92 - | — |
| l.c.l., same basis | gal. | .96 - | 1.01 |
| tanks, same basis | gal. | .85 - | — |
| **SD2B, dms., c.l., dlvd. E. of Miss. R.** | gal. | .92 - | — |
| l.c.l., same basis | gal. | .96 - | 1.01 |
| tanks, same basis | gal. | .85 - | — |
| **SD23H, dms., c.l., dlvd. E. of Miss. R.** | gal. | .90 - | — |
| l.c.l., same basis | gal. | .94 - | .99 |
| tanks, same basis | gal. | .83 - | — |
| **SD29, denatured with acetaldehyde, dms., c.l., dlvd. E. of Miss. R.** | gal. | .93 - | — |
| l.c.l., same basis | gal. | .97 - | 1.02 |
| tanks, same basis | gal. | .86 - | — |

When any of the several SD29 denaturants is supplied by the purchaser, the prices are the same as those of SD21 plus 1½c. per gal. denaturing charge.

| | | | |
|---|---|---|---|
| **Special solvent, dms., c.l., dlvd. E. of Miss. R.** | gal. | .92½- | — |
| l.c.l., same basis | gal. | .96½- | 1.01½ |
| tanks, same basis | gal. | .85½- | — |

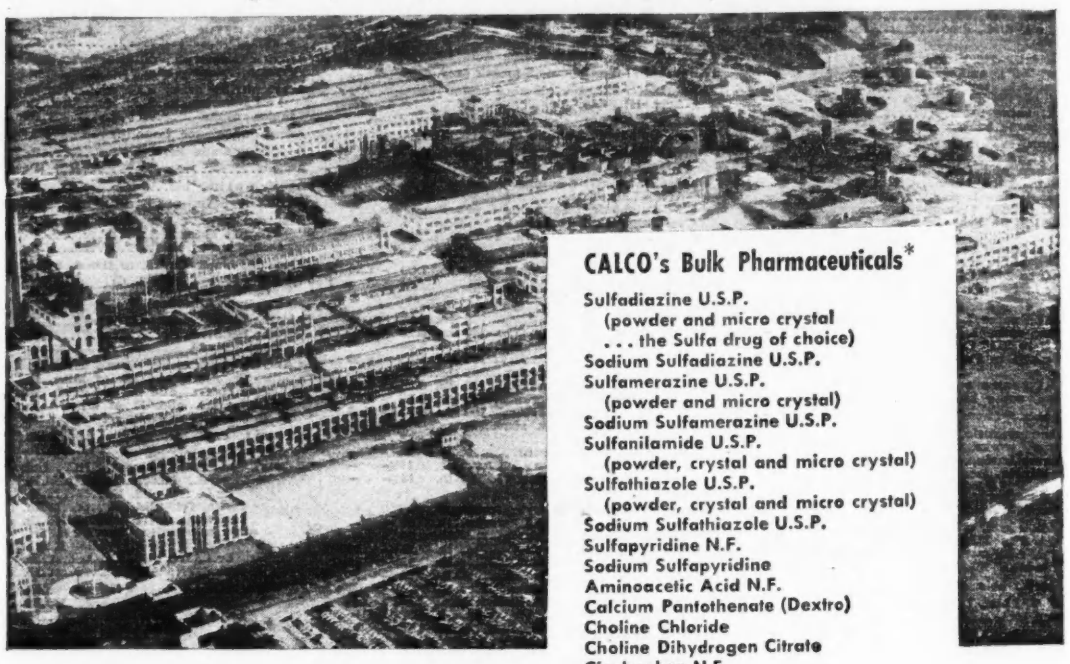
Tankcar sales require written authorization by Alcohol Tax Unit.

| | | | |
|---|---|---|---|
| **Diacetone, acetone free, dms., c.l., dlvd** | lb. | 13½- | 14½ |
| l.c.l., dlvd | lb. | 14 - | 15½ |
| tanks, dlvd | lb. | 12 - | 13 |
| **tech., dms., c.l., dlvd** | lb. | 14 - | — |
| l.c.l., dlvd | lb. | 15 - | — |
| tanks, dlvd | lb. | 12½- | — |
| **Ethyl, 190 pf., dms., c.l., dlvd. E. Miss. R.** | gal. | 18.02 - | — |
| l.c.l., same basis | gal. | 18.06 - | 18.11 |
| tanks, same basis | gal. | 17.95 - | — |
| **absolute, dms., c.l., same basis** | gal. | 18.99 - | — |
| l.c.l., same basis | gal. | 19.03 - | 19.08 |
| tanks, same basis | gal. | 18.92 - | — |
| **Ethylhexyl, dms., c.l., works** | lb. | .30 - | — |
| l.c.l., works | lb. | .30½- | — |
| tanks, works | lb. | .28½- | — |

## Alcohol, Furfuryl—Amyl Alcohol

Alcohol, furfuryl, tech., cns., works..lb. .30 - —
dms., c.l., works..lb. .21½- —
l.c.l., works..lb. .23 - —
tanks, works..lb. .18 - —
Isoamyl (see Carbinol, Isobutyl).
Isobutyl, refd., dms., works..lb. .13 - —
tanks, works..lb. .12 - —
Isopropyl, refd., 91%, dms., incl., c.l., dlvd..gal. .50½- —
l.c.l., dlvd..gal. .53½- —
tanks, dlvd..gal. .41 - —
99%, dms., incl., c.l., dlvd..gal. .54½- —
l.c.l., dlvd..gal. .57½- —
tanks, dlvd..gal. .45 - —
Methyl (see Methanol).
Methylamyl (see Carbinol, methyl-isobutyl).
Octyl, perfumer's grade, bots..lb. 5.50 - —
Phenylethyl, cns..lb. 1.50 - 2.50
Polyvinyl, type A, fiber-pack, Niagara Falls..lb. .65 - .70
type B, fiber-pack, same basis..lb. .60 - .68
Propyl, normal, dms., c.l., works..lb. .12½- —
l.c.l., works..lb. .13 - —
tanks, works..lb. .11 - —
Salicyl (see Saligenin).
Tetrahydrofurfuryl, cns., Cedar Rapids, Ia..lb. .47 - —
dms., c.l., Waverly, N. Y..lb. .40 - —
l.c.l., same basis..lb. .44 - —
tanks, Niagara Falls, N. Y..lb. .36 - —
Aldol, 95%, dms., works..lb. .15 - .16
denaturing grade, dms..gal. 1.33 - 1.48
Aletris root, bgs..lb. 1.75 - 1.80
Algin, bbls., fib, dms..lb. .70 - 1.00
Alizarin (see Red, alizarin).
Alkanet root, bgs..lb. .65 - .70
Allspice, Jamaica (see Pimento).
Mexican, bgs..lb. .14½- .15
Allyl bromide, cbys., 5,000 lbs., works..lb. .09 - —
smaller lots, works..lb. 1.05 - 1.10
Chloride, dms., c.l., dlvd..lb. .14 - —
l.c.l., dlvd..lb. .14½- —
tanks, dlvd..lb. .12½- —
Aloe, Cape, cs..lb. .30 - .31
Curacao, kgs..lb. .35 - .36
Socotrine, kgs..lb. .35 - .36
Aloin, bbls., dms., kgs..oz. 3.75 - 4.05
Alphacellulose, bgs., c.l., works..lb. .64 - .15
Alphanaphthol, bbls..lb. .63 - .70
Alphanaphthylamine, bbls..lb. .38 - .38¾
Alphanaphthylthiourea, 93-98%, fib. dms., works, frt. alld..lb. 4.00 - 4.40
Alphanitronaphthalene, bbls..lb. .34 - —
Alphapicoline, ref. dms., works, frt. equald..lb. .27½- .30
Alphapinene, tanks, S. works..gal. .47 - —
Alphaterpineol, dms., l.c.l., dlvd. E.lb. .18 - —
Alphatocopherol, ampuls..kilo. 750.00 - —
Althea root, NF, peeled, bls..lb. .30 - .35
Alum, ammonia, burnt, USP, bbls., lb. .16 - .18
gran., bbls., works..100 lbs. 3.80 - —
lump, bbls., works..100 lbs. 4.05 - —
powd., bbls., works..100 lbs. 4.20 - —
Potash, gran., bbls., works..100 lbs. 4.05 - —
lump, bbls., works..100 lbs. 4.25 - —
powd., bbls., works..100 lbs. 4.45 - —
Potash-chrome, bbls..lb. 12½- .15
Soda, bbls., c.l., works..100 lbs. 3.25 - —
l.c.l., dlvd..100 lbs. 4.25 - 5.00
Alumina, calcined, bgs., c.l., works..lb. .03½- —
l.c.l., works..lb. .04½- .06¾
crystalline (see Aluminum oxide).
Aluminum acetate, basic solution, 24%, bbls., l.c.l., works..lb. .11 - —
20%, bbls., l.c.l., works..lb. .10 - —
Chloride, anhyd., com'l, dms., c.l., works..lb. .10 - .11
l.c.l., works..lb. .10½- —
cryst., com'l, dms., c.l., works..lb. .06 - —
l.c.l., works..lb. .06½- .06¾
solution, 32°, cbys., c.l., works..lb. .02¾- —
l.c.l., works..lb. .03¼- —
Fluoride, tech., anhyd., bbls., c.l., frt. equald..lb. .10 - —
l.c.l., frt. alld..lb. .11 - .13
Formate, basic solution, cks., c.l..lb. .09½- —
l.c.l., works..lb. .10 - —
Hydrate, heavy, bgs., c.l., frt. equald..ton. 52.00 - 56.00
l.c.l., works..ton. 72.00 - —
light, bgs., dlvd..lb. .17 - —
Hydroxide gel, tech., min. 15% Al ($OH_3$), dms., 10,000 lbs. or more, f.o.b. ship't point..lb. .03 - 03½
ton lots, same basis..lb. .03½- .03¾
smaller lots, same basis..lb. .03¾- .04
14-15% $Al_2O_3$, fib dms., works, lb. .20¾- —
contract, works..lb. .19¾- —
9-9½% $Al_2O_3$, fib. dms., works, lb. .17¾- —
contract, works..lb. .16¾- —
dried, USP XII, fib. dms., works, lb. .78 - —
contract, works..lb. .75 - —
powder, tech. (see Aluminum hydrate).
USP IX bbls., dms..lb. .15 - .17
Laurate, precip., bbls..lb. .42 - —
Linoleate, solid, bbls..lb. 48 - —
Metal, 98-99%, ingots, 10,000 lbs..lb. .15 - —
pigs 10,000 lbs..lb. 14 - —
Naphthenate, liquid, dms., dlvd..lb. .24½- —
Oleate, dms., contract..lb. 43¾- —
Oxide, amorphous (see Alumina, calcined).
cryst., flour, classified, 8-240 mesh, dms., frt. alld..lb. .14 - .15
kgs., ton, frt. alld..lb. .12½- —
smaller lots, frt. alld..lb. .13 - .15
280-400 mesh, dms., frt. alld..lb. .32 - .33
kgs., frt. alld..lb. .31 - —
500 mesh, dms., frt. alld..lb. .55 - .57
kgs., frt. alld..lb. .54 - —
600 mesh, dms., frt. alld..lb. .51 - .53
kgs., frt. alld..lb. .50 - —
optical, floated, kgs., dlvd..lb. .36 - .86
unclassified, dms., frt. alld..lb. .16 - .17
kgs., frt. alld..lb. .15 - —
Aluminum oxide flour prices W. of Denver ½c. per lb. higher.
Paste, dining, extra fine, dms..lb. .56 - .63
standard, dms..lb. .38 - .43
Powder, lining, extra fine, dms..lb. .53 - —
litho, dms..lb. .47 - .62
standard, dms..lb. .62 - —
rubber comp., dms..lb. .47 - —
unpolished, stand., dms..lb. .43 - .44
varnish, stand., dms..lb. .47 - —
Aluminum powder and paste prices are f.o.b. shipping point. Add 1c. per lb. for 100 lb. drs., 1½c. per lb. for 50-lb. drs., 3c. per lb for 10-lb. cans, and 5c. to 12c. per lb. for smaller containers. Deduct 1c. per lb. for single shipment of 400 to 1,499 lbs., 2c for 1,500 to 4,999 lbs., 3c. for 5,000 to 19,999 lbs., and 4c. for 20,000 lbs or more. Where destination is within the continental U. S., a deduction equivalent to the lowest available common carrier, transportation rate will be made from sellers' invoice on orders of 200 lbs. or over.
Resinate, precip., dms..lb. 20¼- —
Stearate, dibasic, ctns., c.l..lb. .44 - —
l.c.l..lb. .45 - —
monobasic ctns., c.l..lb. .44 - —
l.c.l..lb. .45 - —
tribasic, ctns., c.l..lb. .49 - —
less than 1 ton..lb. .50 - .51
Sulphate, com'l, bgs., c.l., works frt. equald..100 lbs. 1.30 - —
l.c.l., same basis..100 lbs. 1.70 - —
iron-free, bgs., c.l., works, frt. equald..100 lbs. 2.50 - —
l.c.l., works..100 lbs. 2.90 - —
Trihydrate, heavy (see Aluminum hydrate).
Ambergris, gray, tins..oz. 8.50 - 12.00
Aminoazotoluene, bbls..lb. .85 - —
Aminomethylpropanol, cns., dms., works, lb. .50 - .60
Aminomethylethanolamine, tanks, works, lb. .50 - —
Aminopyrine, bots., dms..lb. 6.00 - 6.10
Ammonia, anhydrous, fertilizer, tanks, works, frt. equald..ton. 59.00 - 70.00
pure, cyls., extra..lb. .16 - —
refrigeration, tanks, works..ton. 61.50 - 72.50
Aqua, dms., c.l., works..lb. .03 - .03¼
l.c.l., works..lb. .03¼- —
tanks, works ($NH_3$ content)..ton. 65.00 - —
Ammoniac gum (see Gum, ammoniac).
Salt, gray, bbls., c.l., works..100 lbs. 7.00 - —
l.c.l., works..100 lbs. 7.40 - —
white, gran., bbls., c.l., works..100 lbs. 4.75 - —
l.c.l., works..100 lbs. 5.15 - —
Ammonium acetate, purified, dms..lb. .39 - .40
reagent, jars..lb. .61 - .63
Benzoate, USP, dms., kgs., 4,000 lbs., frt. alld..lb. .80 - —
smaller lots, frt. alld..lb. .81 - 1.08
Biborate, bbls., c.l., works..ton. 320.00 - —
ton lots, works..ton. 338.50 - —
less ton lots, works..ton. 343.50 - —
Bicarbonate, dms., works, c.l..lb. .064 - .0975
Bichromate, bbls., works..lb. .26 - .30
Bifluoride, dms., frt. alld. E..lb. .15½- .16¾
Bromide, gran., NF, bbls..lb. .36 - .37
dms..lb. .37 - .40
powdered ammonia bromide 10c. per lb. higher.
Carbonate, USP, lump, dms..lb. 16½- .17
powdered, 1c. per lb. higher.
Chloride, tech. (see Ammoniac, sal).
USP, bbls., dms., kgs..lb. .13 - .15
Citrate, dibasic, bbls..lb. .75 - —
dms..lb. .80 - .85
Fluoride (see Bifluoride).
Hydroxide (see Ammonia aqua).
Hypophosphite, NF, dms..lb. 1.25 - 1.27
Iodide, NF, jars..lb. 3.90 - 3.96
Linoleate, plastic, 80%, dms., works..lb. .40½- —
kgs., works..lb. .42½- —
25%, dms., frt. alld. zone 1..lb. .21½- —
tech., bbls., works..lb. .37 - —
dms., works..lb. .39 - —
Molybdate, CP, cryst., kgs..lb. 1.26 - 1.30
fine cryst., bbls., kgs..lb. .84 - .87
purified, dms..lb. 1.10 - 1.12
Nitrate, fertilizer grade, Canadian, 33.5% N, bgs., c.l., shipping point..ton. 79.50 - —
dom., bgs., western works..ton. 50.00 - 52.50
Nitrate-dolomite, 20.5% N, bgs., Hopewell, Va..ton. 37.50 - —
Oleate, dms..lb. .37½- —
Oxalate, fine gran., bbls..lb. .23 - —
dms..lb. .25 - .29
Pentaborate, gran., bbls., c.l., works, ton. 230.00 - —
ton lots, works..ton. 248.50 - —
less ton lots, works..ton. 253.50 - —
Ammonia pentaborate powder, $10 per ton higher.
Perchlorate, kgs..lb. .25 - —
Persulphate, kgs..lb. .25½- .28¾
Phosphate, dibasic, NF V, bbls., kgs, lb. .37 - .39
tech., bgs., c.l., works..lb. .07 - —
l.c.l., works..lb. .07½- —
Salicylate, NF, dms., kgs..lb. 1.25 - —
Silicofluoride, bbls., works..lb. .12½- —
Stearate, anhydrous, dms..lb. .34 - —
paste, dms..lb. .06½- —
Sulphamate bbls., dms., works..lb. .18 - .20
Sulphate, bulk, producing ovens..ton. 38.00 - 40.00
Sulphide, liquid, 40-45% basis, 100%, dms., c.l., works..lb. .10 - —
l.c.l., works..lb. .10½- —
tanks, dlvd or frt alld..lb. .08½- —
Sulphocyanate, pure, dms., jars..lb. .63 - .71
Sulphocyanide, (tech., bbls., c.l., works..lb. .13 - —
l.c.l., bbls., works..lb. .14 - .17
Thiocyanate (see Ammonia sulphocyanide).
Thioglycolate, highly purified, 100% basis, bbls..lb. 7.10 - 8.25
Amyl acetate, ex fusel oil, tech., dms., c.l., dlvd..lb. .30½- —
l.c.l., dlvd..lb. .31½- —
tanks, dlvd..lb. .29 - —
ex pentane, dms., c.l., frt. alld. E. of Miss. R..lb. .24 - —
l.c.l., same basis..lb. .25 - —
tanks, same basis..lb. .23 - —
Alcohol (see Alcohol, amyl).


# Let CALCO's large-capacity plants supply your Bulk Pharmaceuticals



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**CALCO's Bulk Pharmaceuticals***

Sulfadiazine U.S.P.
(powder and micro crystal
. . . the Sulfa drug of choice)
Sodium Sulfadiazine U.S.P.
Sulfamerazine U.S.P.
(powder and micro crystal)
Sodium Sulfamerazine U.S.P.
Sulfanilamide U.S.P.
(powder, crystal and micro crystal)
Sulfathiazole U.S.P.
(powder, crystal and micro crystal)
Sodium Sulfathiazole U.S.P.
Sulfapyridine N.F.
Sodium Sulfapyridine
Aminoacetic Acid N.F.
Calcium Pantothenate (Dextro)
Choline Chloride
Choline Dihydrogen Citrate
Cinchophen N.F.
(and Sodium Salt)
Folic Acid
Neocinchophen U.S.P.
Mandelic Acid N.F.
Calcium Mandelate U.S.P.
Menadione U.S.P.
Methylene Blue U.S.P.
(powder and crystal)
Nicotinic Acid U.S.P.
Nicotinamide U.S.P.
Nicotinamide HCl.
Pyridoxine HCl.
Saligenin
Propylthiouracil
Phenothiazine N.F.
(Regular and Drench grades for Veterinary use)
Certified Colors for Pharmaceutical and Cosmetic Use

*In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.

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CALCO CHEMICAL DIVISION
AMERICAN CYANAMID COMPANY
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ANILINE OIL
CALCIUM LACTATE
COUMARIN
ETHYL ACETATE 95-98%
LANOLIN ALCOHOL
MONOETHANOLAMINE
PARADICHLOROBENZENE
PENTAERYTHRITOL
SODIUM SULPHIDE
TETRACHLORETHANE
ZINC PEROXIDE

** √ We are in a strongly competitive position.*

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CABLE—"WILNEUBERG"

### Amyl Butyrate—Black Indian Hemp Root

Amyl butyrate, dms.....lb. .90 - 1.00
Chloride, mixed, tech., dms., c.l., works..lb. .07 - —
l.c.l., works.....lb. .08 - —
tanks, works.....lb. .06 - —
Ether (see Ether, amyl).
Nitrite, USP, bots.....lb. 1.75 - 1.83
Mercaptan, dms., works.....lb. 1.10 - —
Salicylate, cns. .....lb. .77 - 1.00
Stearate, dms., works.....lb. .42 - .45½
Anethol, com'l, dms., works.....lb. .50 - —
NF, dms.....lb. .60 - 1.40
Angelica root, dom. (atropurpurea), bls..lb. 1.10 - 1.13
imported, bls.....lb. 1.50 - 1.60
Angostura bark, bls.....lb. .50 - .55
Anilin oil, dms., c.l., works, frt. alld. lb. .15 - —
l.c.l., works, frt. alld.....lb. .16 - —
tanks, works, frt. alld.....lb. .14 - —
Salt, dms., works.....lb. .24 - .26
Anise, Argentine, bgs.....lb. No stocks
Chinese, Star .....lb. .15½- .16
Cyprus, bgs. .....lb. .20 - .20½
Mexican, bgs. .....lb. No stocks
Syrian, bgs., futures.....lb. .19½- .20
Anisic aldehyde, bots., cns.....lb 2.27 - 3.35
dms .....lb 2.22 - 2.75
Annatto paste, bxs.....lb. .34 - .37
Seed, bgs.....lb. .19 - .20
Anthracene, 80-85%, bbls., works....lb. .60 - .80
90%, bbls., works.....lb. .81 - 1.00
Anthraquinone, 99.5%, bbls.....lb. .80 - —
Antimony butter (see Antimony chloride).
Chloride, solut., cbys.....lb. .17 - —
Metal, bulk, c.l., mines.....lb. .33 - .33½
Needle, cs.....lb. No stocks

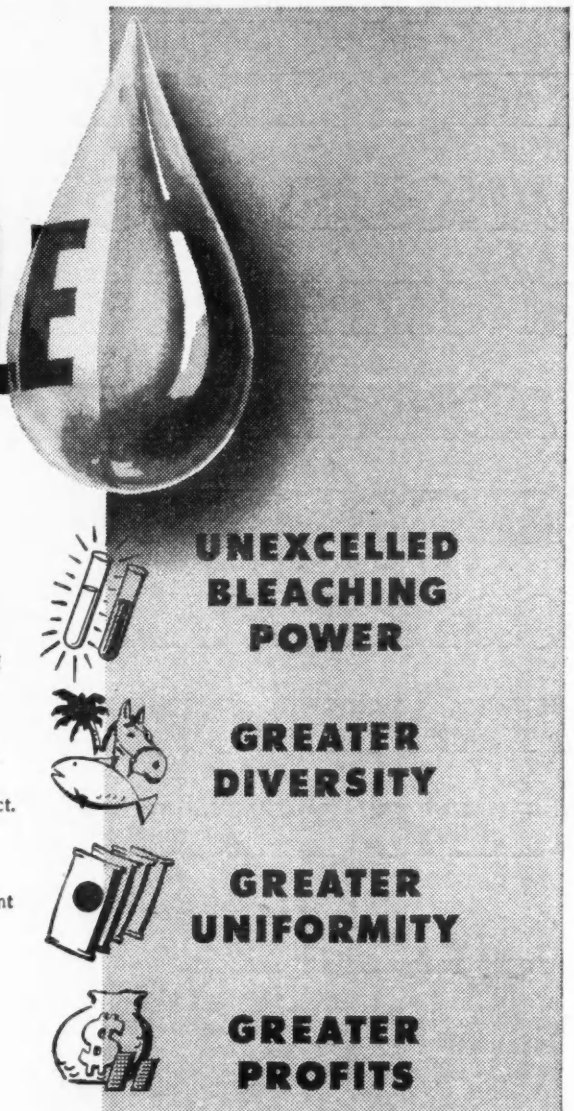
Antimony oxide, ceramic grade, bgs., c.l., dlvd..lb. .29½- —
l.c.l., dlvd.....lb. .30½- —
paint grade, bgs., c.l., works....lb. .33½- .34
l.c.l., works.....lb. .34½- .35
Salt, 65%, bgs., c.l., dlvd. E. of Miss. lb. No stocks
Sulphide, 65-70%, bbls., c.l., works.lb. .22 - —
l.c.l., works.....lb. .24 - —
Antimony-potassium tartrate (see Tartar emetic)
Antipyrine, bbls.....lb. 2.35 - 2.45
Apomorphine, bots. .....oz.23.20 -23.70
Archil extract, bbls.....lb. No stocks
Areca nuts, powd., bbls.....lb. .22 - .25
Arecoline hydrobromide, bots.....oz. 6.10 - 7.10
Argols, min. 70%, bgs., shipment ports, per 100 kilos (100% purity).18.00 - —
Arnica flowers, bbls.....lb. .85 - .90
Arrowroot, powd., bgs., bbls.....lb. .16 - .17
Arsenic, metal, lump, bbls., c.l.....lb. No stocks
Sulphide, yellow, bbls.....lb. No stocks
Trioxide (see Acid, arsenous).
White, powd., bbls., c.l.....lb. .06¼- —
l.c.l. .....lb. .08 - .09
Asafetida, cs. .....lb. .35 - .36
powd., bbls., dms.....lb. .50 - .53
Asbestine (see Talc, fibrous, N. Y.)
Asbestos fiber, 5D and 5K, bgs., c.l. (20 tons), Can. mines..ton.76.50 - —
5R, bgs., c.l. (20 tons), same basis. ton.68.50 - —
6D, bgs., c.l. (30 tons), same basis. ton.51.00 - —

Asbestos fiber, 7D, bgs., c.l. (30 tons), same basis..ton.46.50 - —
7F, bgs., c.l. (30 tons), same basis. ton.44.00 - —
7K, bgs., c.l. (30 tons), same basis. ton.31.00 - —
7M, bgs., c.l. (30 tons), same basis, ton.27.50 - —
7R, bgs., c.l. (30 tons), same basis. ton.26.50 - —
7RF, bgs., c.l., same basis....ton.27.00 - —
7T, bgs., c.l., same basis.....ton.25.50 - —
7TF, bgs., c.l., same basis.....ton.27.00 - —
Asphaltum, California, dms., c.l....ton.36.40 - —
l.c.l. .....ton.41.40 - —
Cuban, A, bulk, c.l. .....ton.60.00 - —
l.c.l. .....ton.90.00 - —
B, bulk, c.l. .....ton.38.50 - —
l.c.l. .....ton.55.00 - —
Gilsonite, brilliant black, selects 270°-295° F. fus. pt., bgs., f.o.b. Colo. mines..ton.36.50 - —
seconds, 300°-390° F. fusing point, not uniform, bgs., mines..ton.29.00 - —
jet, bgs., ton lots, gross weight, Colo. mines..ton.29.00 - —
Manjak, No. 10, crude, dms., works, lb. .06½- —
process form, bgs., works.....lb. .05¾- .12
Mexican, refd., dms., f.o.b. Tampico, metric ton.27.50 - —
South American, refd., dms., c.l., N. J. refy..ton.22.00 -23.00
l.c.l., same basis.....ton.24.00 -25.00
tanks, same basis.....ton.15.00 - —
Atropine, bots. .....oz.13.50 -15.00
Sulphate, bots. .....oz.10.35 -12.00

## B

Balm of Gilead buds, bgs.....lb. 2.00 - 2.25
Barbasco root (see Cube root).
Barberry root bark, bgs.....lb. .75 - .80
Barbital, dms. .....lb. 4.50 - —
Sodium, dms. .....lb. 4.75 - —
Barium carbonate, precip., bgs., 10 tons and up, works..ton.67.50 -75.00
small lots, works.....ton 74.50 -82.00
Chlorate, kgs., works.....lb. .25½- .31
Chloride, NF, cryst., dms.....lb. .25 - .27
pure, bbls., kgs.....lb. .10 - .12
tech., bgs., c.l., works.....ton.85.00 - —
l.c.l., works .....ton.95.00 - —
Chromate, bgs., frt. equald.....lb. .31½- .32
Dioxide, dms., c.l., works.....lb. .12 - —
l.c.l., works .....lb. .12 - —
Fluoride, bbls. .....lb. .14 - —
Hydrate, crystals, bgs.....lb. .09 - .09½
Hydroxide, bbls., works.....lb. .19 - —
Iodide, bots. .....lb. 5.12 - —
Monoxide (see Oxide).
Nitrate, bbls., c.l., works.....lb. .11½- —
l.c.l., works .....lb. .13 - —
Oxide, grd., dms., works.....lb. .11 - .11½
l.c.l., works .....lb. 12½- .13½
Peroxide (see Dioxide).
Silicofluoride, bbls.....lb. .17 - .19
Stearate, ctns., 1-ton up.....lb. .48 - .49
smaller lots.....lb. .50 - .51
Sulphate, tech (see Barytes and Blanc fixe)
X-ray, bbls. .....lb. .11 - .13
Sulphide, dms., c.l., works.....ton 55.00 - —
l.c.l., works .....ton 70.00 - —
Baryte ore, approx. 94% $BaSO_4$, bulk, mines..ton. 9.40 -12.50
Barytes, water-grd., paper bgs., c.l., St. Louis..ton.33.80 - —
l.c.l., same basis.....ton.35.10 - —
ex whse., N. Y.....ton.46.25 - —
Southern off-color, bgs., mines....ton 19.00 - —
95.75%, bgs., mines.....ton 20.00 - —
Barberry bark, bgs.....lb. .12 - .13
Bay leaves (see Laurel leaves).
Belladonna leaf, bls.....lb. 1.40 - 1.50
Root, bls .....lb. .65 - .70
Bauxite, bulk, mines.....ton. 8.50 -10.00
Bentonite, 200 mesh, bgs., works..ton.11.00 - —
Benzaldehyde, NF, dms.....lb. .68 - .90
tech., cbys., dms.....lb. .45 - .55
Benzene (see Benzol).
Hexachloride, tech., 11% gamma bgs., dms., c.l., works..lb. .35½- .42½
l.c.l., works .....lb. .379 - .474
dust, dry, 50%, distributors, dms., c.l., dlvd..lb. .22½- —
l.c.l., dlvd. .....lb. .23½- —
wet, 50%, distributors, dms., c.l., dlvd..lb. .23½- —
l.c.l., dlvd. .....lb. .24½- —
Benzidin base, bbls.....lb. .85 - —
Benzocaine, cns. .....lb. 3.50 - 3.85
Benzol (benzene), pure, nitration and 90%, dms, ret., works..gal. .27 - .29
tanks, E. of Omaha, frt. alld. up to 2c..gal. .21 - —
W Coast, Minnequa, Colo., same basis..gal. 21 - —
Benzophenone, dms. .....lb. 1.30 - 1.70
Benzoyl chloride, cbys. .....lb. .20 - .28
l.c.l., works.....lb. .22½- —
Peroxide, pure, fib. ctns., works..lb. .90 - 1.05
Benzyl acetate, f.f.c., dms.....lb. .60 - 1.00
dms .....lb. .60 - .70
Alcohol (see Alcohol, benzyl).
Benzoate, f.f.c., cns., dms.....lb. 1.00 - 1.40
Chloride, tech., cbys., c.l., works, frt. equald..lb. .19 - .21½
l.c.l., same basis.....lb. .20 - .22½
Cinnamate, cns.....lb. 3.65 - 4.00
Formate, cns. .....lb. 1.95 - 3.50
Propionate, bots. .....lb. 1.85 - 2.30
Salicylate, bots. .....lb. 1.80 - 2.25
Benzylidinacetone, bots.....lb. 1.85 - 2.70
Benzylisoeugenol, bots. .....lb. 9.50 - —
Berberine bisulphate, cns.....lb. No stocks
Hydrochloride, bots. .....lb. No stocks
Sulphate, cns. .....lb. No stocks
Berberis root, bls.....lb. .30 - .35
Betagammapicoline, dms., c.l., works.. lb. .23½- —
l.c.l., works .....lb. .24 - —
Betanaphthol, resublimed, dms., works. lb. .75 - —
tech., bbls., c.l., works.....lb. .30 - —
l.c.l., works .....lb. .32 - —
Benzoate, fib. dms., works.....lb. 1.75 - —
Salicylate, dms. .....lb. 5.00 - —
Betanaphthylamine, tech., bbls., works. lb. .62 - .70
Betapicolin, 90%, ret. dms., c.l., works. lb. 1.35 - —
l.c.l., works .....lb. 1.70 - —
Beth root, bls.....lb. .50 - .55
Biotin, cryst. .....gram.12.50 - —
Bismuth chloride, jars.....lb. 4.50 - —
Citrate, USP VIII, jars.....lb. 3.12 - —
Hydroxide, dms. .....lb. 3.38 - —
Metal, bxs., ton lots.....lb. 2.00 - —
Nitrate, cryst., dms.....lb. 1.70 - —
Oxychloride, dms. .....lb. 3.79 - —
Oxide, anhydrous, dms.....lb. 4.40 - —
Subcarbonate, USP, dms.....lb. 2.60 - 2.63
Subgallate, NF, fib. dms.....lb. 2.45 - 2.48
Subiodide, fib. dms.....lb. 4.90 - —
Subnitrate, USP, dms.....lb. 2.15 - 2.18
Subsalicylate, USP, dms.....lb. 3.05 - —
Sulphocarbolate, fib. dms.....lb. 4.20 - —
Bismuth-ammonium citrate, USP, powd., dms..lb. 3.80 - —
Black, acetylene, bgs., c.l., works..lb. .13½- —
cs., l.c.l., ship. point.....lb. .17 - .19
Bone, bgs., bbls., l.c.l., dlvd.....lb. .14½- .22½
Carload price is ½c. per lb. under the above schedule, with deliveries to the Pacific Coast, ex dock or whse., 1½c. per lb. higher.
Carbon, channel, beads, bulk, c.l., works..lb. .07 - —
bgs., c.l., works.....lb. .0732- —
l.c.l., dlvd. or whse.....lb. .11¼- .117
uncompressed, regular, bgs., c.l., works..lb. .08 - —
bgs., ctns., l.c.l., dlvd. or whse..lb. .13¼- —
furnace, fast extruding, bgs., c.l., works..lb. .05½- —
ctns., l.c.l., whse.....lb. .09½- —
high modulus, bgs., c.l., works. lb. .05 - —
ctns., l.c.l., whse.....lb. .09 - —
semi-reinforcing, bgs., c.l., works. lb. .03½- —
ctns., l.c.l., whse.....lb. .07½- —
very fine, bgs., c.l., works.....lb. .0732- —
l.c.l., dlvd. or whse.....lb. .1125- .1170
Charcoal (see C).
Graphite (see G).
Iron oxide, synthetic, bgs., c.l., works..lb. .16¾- —
l.c.l., works .....lb. .11 - —
Lamp, bgs., c.l., works.....lb. .07 - .30
Mineral, bgs., works.....lb. .0160- .0675
Black ash (see Barium sulphide).
Black dyes (see Dyes).
Black haw root, bark, bls.....lb. .75 - .80
Tree bark, bls.....lb. .30 - .35
Black Indian hemp root, bls.....lb. .55 - .60


# IT'S SIMPLE



**"Special" FILTROL*** is *designed* to decolorize *fatty oils.* It possesses two to three times the decolorizing power of raw clays, hence you use only one-half to one-third as much to produce uniform, low color-specification products.

**"Special" FILTROL** is "tailor-made" to fit a wide range of oils, normal or hard-to-bleach—that's why leading fatty oil refineries operate continuously with "Special" Filtrol.

**"Special" FILTROL** is processed in a manner that assures decolorizing uniformity in every lot. Uniform decolorizing power assures a uniform color in the finished fatty oil product.

**"Special" FILTROL** gives refiners greater profits; 30 per cent to 50 per cent less Filtrol Adsorbent gives the same color, therefore Refiners using Filtrol *save* and *sell* 30 per cent to 50 per cent of the valuable *finished* oil now lost in the press cake when raw clays are used. Other profits result from smaller filter press requirements, less press cake disposal, lower labor costs and with greatly reduced shipping costs and storage space requirements.

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UNEXCELLED BLEACHING POWER

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GREATER PROFITS

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PRODUCT OF RESEARCH AND DEVELOPMENT
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write for name of agent in your country
écrivez pour le nom de l'agent de votre pays
diríjase pidiendo el nombre del agente en su país

Blanc fixe, dry, by-product.. bgs., c.l., works..ton.75.00 - —
l.c.l., works .....ton.82.50 - —
direct process, bgs., c.l., works....ton.85.00 - —
l.c.l., works .....ton.90.00 - —
N. Y. whse.....ton.108.00 -120.00
bbls., c.l., works.....ton.90.00 - —
l.c.l., works .....ton.95.00 - —
N. Y. whse.....ton.113.00 - —
pulp, 66⅔%, bbls., c.l., works..ton.65.00 - —
l.c.l., same basis.....ton.71.00 - —

Bleaching powder, dms., c.l., works....100 lbs. 3.75 - —
l.c.l., works .....100 lbs. 4.25 - —
bbls., c.l., works.....100 lbs. 3.50 - —
l.c.l., works.....100 lbs. 4.00 - —

Blood, dried, 16-16½% ammo., bgs.....unit-ton. 6.65 - —
high-grade, unground, 16-17% ammon; bulk, Chicago..unit-ton. 7.00 - —
soluble, bgs., l.c.l.....lb. .17 - .25

Bloodroot, bls.....lb. .75 - .80

Blue, alkali, dry, bbls., dlvd. N. of Tenn. and N. C., E. of Miss. River, including St. Paul, Minneapolis, Davenport, Rock Island, St. Louis.....lb. 1.90 - —
Toner, bbls., litho flushed, same basis..lb. 1.10 - —
Celestial, bbls., same basis.....lb. .15 - .16
Chinese, bbls., same basis.....lb. .45 - —
Cobalt, genuin, bbls., same basis lb 4.90 - —
imitation (see Blue, ultramarine)
Copper-phthalocyanin, full strength, bbls., same basis..lb. 3.75 - 3.85
80%, bbls., same basis.....lb. 3.00 - 3.40
Iron (see Blue, Chinese, Milori, Potash Prussian, and Soda).
Methyl violet toner, bbls. same basis lb. 4.20 - —
Milori, bbls., same basis.....lb. .45 - —
Peacock, fugitive, 100% color strength, same basis..lb. .60 - .70
Permanent toner, green shade, molybdic, bbls., same basis lb. 3.75 - —
Tungstic .....lb 4.00 - —
Potash, CP, bbls., same basis.....lb. .51 - —
Prussian, bbls., same basis.....lb. .45 - —
soluble, bbls., same basis.....lb. .45 - —
Soda, CP, bronze, bbls same basis lb .99 - —
Ultramarine, cobalt type, dry or pulp, bbls., same basis..lb. .25 - .29
jobbing type, dry, bbls., same basis lb .14 - .18
regular types, dry or pulp, bbls., same basis..lb. .19 - .29
Victoria, toner, molybdic, bbls... lb 3.75 - —
Tungstic, bbls.....lb 3.75 - —
Ink toner, bbls., same basis ...lb. 2.05 - 2.12
Violet toner, molybdic, bbls., same basis. lb 1.24 - —
Tungstic, kgs., same basis. .....lb. 2.60 - 2.70

Blue dry colors, dlvd prices ½c higher Ala. Fla., Ga., La. (Shreveport, 1½c., Miss., N. C., S. C., Tenn., Tex. (El Paso, 2c.), Cedar Rapids, Des Moines, Kansas City, Lincoln Omaha, St. Joseph, 1.6c. higher Pac. Coast, Denver, Pueblo, Salt Lake City, Wichita, frt equalized with Chicago

Blue dyes are listed under Dyes

Bluefleg, root, bls.....lb. No stocks

Bluestone (see Copper sulphate).

Blue vitriol (see Copper sulphate).

Boldo leaves, bls.....lb. .09 - .11
Bone, raw, bulk, Chicago.....ton 75.00 - —
junk, bulk, same basis .....ton 50.00 -52.00
Meal, raw, 4½% ammon., 50% phos., bgs., E. works. ton 65.00 - —
Chicago, works..... ton 60.00 - —
steamed, feeding grade, 1% ammon., 60% phos., bgs., E. works. ton 67.00 - —
Chicago, works ..... ton 65.00 - —
fertilizer grade, 3% ammon., 50% phos., bgs., E. works..ton 60.00 - —
Chicago, works . .....ton 60.00 - —
Phosphate, defluorinated (see D)
precipitated (see Calcium phosphate tribasic precip)

Boneset leaves, bls.....lb. .17 - .18
Borage flowers, bls.....lb. .55 - .60

Borax, tech., 99½%, cryst., paper bgs., c.l., works, frt. split. ton 74.50 - 76.00
ton lots, ex whse., N. Y. or Chi..ton.94.20 -94.50
less ton lots, same basis. ton.89.20 -90.50
bbls., c.l., works, frt. split. ton.94.50 - —
ton lots, ex whse., N. Y. or Chi..ton.114.20 -114.50
less ton lots, same basis..ton 119.20 -119.50
fine gran., bulk, works..... ton.44.50 -47.50
paper bgs., c.l., works, frt. split. ton.48.50 - —
ton lots, ex whse., N. Y. or Chi..ton.68.20 -68.50
less ton lots, same basis..ton 73.20 -73.50
bbls., c.l., works, frt. split..ton.68.70 - —
ton lots, ex whse., N. Y. or Chi..ton.88.20 -88.50
less ton lots, same basis. ton.93.20 -93.50
powdered, paper bgs., c.l., works, frt. split. ton.53.50 - —
ton lots, ex whse., N. Y. or Chi..ton.73.20 -73.50
less ton lots, same basis..ton.78.20 -78.50
bbls., c.l., works, frt. split..ton.73.70 - —
ton lots, ex whse., N. Y. or Chi..ton.93.20 -93.50
less ton lots, same basis..ton.98.20 -98.50
Borax packed in kgs. is $40 per ton higher than borax packed in paper bags USP, $15 per ton higher.

Bordeaux mixture, bgs., c.l., works, frt. alld, or nearest whse. point..lb. .15 - .21
l.c.l., same basis.....lb. .16 - .23

Bornyl thiocyanoacetate (see Isobornyl thiocyanoacetate).

Brazilwood extract (see Hygernic).

Brimstone (see Sulphur).

Bromine, purified, cs., c.l., frt. alld. E. of Rockies..lb. .21 - —
1,000 lbs., same basis.....lb. .23 - —
single pkgs., same basis.....lb. .28 - —
dms., lead-lined, c.l., dlvd.....lb. .19 - —

Bromoform, USP, bots.....lb. 1.50 - 1.70
clys. .....lb. 1.42 - —

Bromstyrol, bots.....lb. 4.85 - 6.25

Bronze powder, aluminum (see A).
Gold, litho., cans, dms., works..lb. .50 - .60
moulding, cans, dms., works..lb. .80 - 1.00
printing ink, cans, dms., works. lb. .95 - 1.10
radiator, cans, dms., works...lb. .60 - .65

Broomtop, bls. .....lb. .25 - .26

Brown, iron, synth., bgs., l.c.l., works. lb. .12 - .12½
Oxide, metallic, bgs., works.....lb. .03 - .03¼
Stop, crystals, works.....lb. .12 - —
powdered .....lb. .13 - —
sienna, burnt, paper bgs., c.l., works..lb. .03½- .14¾
l.c.l., works .....lb. .04 - .15
raw, paper bgs., c.l., works.....lb. .04 - .12½
l.c.l., works .....lb. .04¼- .12¾
Umber, burnt, American, c.l., bbls., works..lb. .04½- .05¾
l.c.l., bgs., works.....lb. .05 - .06¾
Turkey type, bgs., c.l., Boston, Bethlehem, Easton, Pa., Hiwassee, Va., N. Y..lb. .05¾- .07¾
l.c.l., works .....lb. .06 - .08

Brown, umber, raw, American, bgs., same basis..lb. .03¾- .06
Turkey type, bgs., same basis lb. .06 - .06¼

Vandyke, bbls., works.....lb. .09¾- .12

Brucine, cns., 100 ozs.....oz. .40 - .50
Sulphate, cns., 100 ozs.....oz. .30 - .40

Bryonia root, bls.....lb. .38 - .39

Buchu leaves, bls.....lb. .85 - 1.00

Buckthorn bark, bls.....lb. .26 - .27
cut and sifted, bbls.....lb. .40 - .42

Berries, bgs. .....lb. .90 - 1.00

Burdock root, bls.....lb. .25 - .30

Butane, indust., tanks, group 3....gal. .06 - —

Butyl acetate, normal, ferment, Ill., Ind., prod., dms., c.l., works, frt. alld. E. of Miss..lb. .31½- —
l.c.l., same basis.....lb. .32½- —
tanks, same basis.....lb. .30 - —
tankwagons, same basis....lb. .30½- —
other production, dms., c.l., same basis..lb. .31½- —
l.c.l., same basis.....lb. .32½- —
tanks, same basis.....lb. .30 - —
synthetic, dms., c.l. same basis. lb. .19 - —
l.c.l., same basis.....lb. .20 - —
tanks, same basis.....lb. .17½- —
Normal butyl acetate, W. of Miss. ½c per lb higher.
secondary, dms c.l. dlvd E. of Miss. lb. .14½- —
l.c.l., same basis.....lb. .15 - —
tanks, same basis.....lb .13 - —

Alcohol (see Alcohol, butyl).

Aldehyde, dms., c.l., works.....lb .20½- —
l.c.l., works .....lb .21½- —
tanks, works .....lb .19½- —

Ether (see Ether, butyl)

Butyl lactate, dms., c.l., frt. alld. E. of Rockies..lb. .45½- —
l.c.l., same basis.....lb. .46½- —
tanks, same basis.....lb. .44 - —

Laurate, dms., works.....lb. .42 - —

Methacrylate, M-4, dms., works..lb. .60 - —
cns., works .....lb. .63 - .67
P-4 cns., works.....lb. .65 - —

Myristate, dms., works.....lb. No prices.

Oleate, ref., dms., l.c.l., works....lb. .52 - —

Phenylacetate, dms. .....lb. 2.00 - 2.25

Phthalate (see Dibutyl phthalate).

Propionate, dms., dlvd.....lb. No stocks
tanks, dlvd. .....lb. No stocks

Stearate, dms., c.l., frt. alld. E of Rockies..lb. .45 - —
l.c.l., same basis .....lb. .50 - —

Butyl isobutyl methacrylate P-5, 50/50, cns., works, lb .60 - —

Butyric ether (see Ethyl butyrate)

## C

Cadmium bromide, jars.....lb 1.68 - 1.97
Iodide, cns .....lb 4.39 - 4.90
Lithopone (see Yellow)
Metal, ingots or sticks, cs., dlvd lb 1.75 - 1.80
patent shapes cs., dlvd .....lb 1.75 - 1.80
Selenide (see Red)
Sulphide (see Yellow)

Caffeine, cryst dms 100 lbs or more. lb 4.75 - 5.00
anhydrous, dms 100 lbs or more lb 5.00 - —

Citrated, dms., 100 lbs. or more... lb 3.00 - —
Hydrobromide, bots. ..... lb 6.50 - —

### Blanc Fixe—Calcium Gluconate

Calabar beans, bgs., futures.....lb. .65 - .66
Calamus root, dom., bgs.....lb. .35 - .45
imported, bleached, bls.....lb. .70 - .80
peeled, bls.....lb. .40 - .41

Calciferol, cryst., vials, 10,000 or more standard units (1 standard unit=1 000.000 USP units), works. gram. 4.00 - —
1,000 to 10 000 s.u., works..gram. 4.40 - —
less than 1,000 s.u., works..gram. 4.80 - —

In edible oil, dms., 10,000 or more... 10 - —
1,000 to 10,000 s.u., works....unit. .11 - —
less than 1,000 s.u., works..unit. .12 - —

Calcium acetate, bgs., dlvd....100 lbs. 3.00 - 4.00
Arsenate, dealers, dms., c.l., whse., works, frt. alld..lb. .09½- .10½
l.c.l., same basis.....lb. .10½- .12¾
Bromide, NF, jars.....lb. .75 - .95
Carbide, dms., c.l., works.....ton 107.00 -140.00
Carbonate (see Chalk and Whiting).
Calcium chloride, cryst., purified, bbls., jars..lb. .28 - .30
flake, 77-80%, paper bgs., c.l., works, frt. equald..ton.22.00 - —
l.c.l., same basis.....ton.32.00 -41.00
liquor, works, basis 40%, tankcars. ton 9.00 - —
solid, 73-75%, dms., c.l., works, same basis..ton.20.00 - —
l.c.l., works, same basis..ton.30.00 -50.00
Chromate, bgs., frt. equald.....lb. .29½- .30
Cyanide, dms., dlvd. E. of Rockies..lb. .30 - .50
Gluconate, AA, bbls.....lb. .65 - .72
cns .....lb. .83 - .90
USP, bbls. .....lb. .58 - .65
cns .....lb. .76 - .83

ORTHOTOLUIDINE
SODIUM SULPHIDE Flake & Solid
CAUSTIC SODA Solid
GLUCOSE 45° Baumé
FORMIC ACID 90%
TRICHLORETHYLENE
ANILIN OIL
BLEACHING POWDER 70%
DIRECT BLACK
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## Calcium Hydride—Chlorine, Liquid

Calcium hydride, dms., works.....lb. .90 - —
Glycerophosphate, NF, fib. dms..lb. 1.65 - 1.80
Hypochlorite, 100-lb. dms., dlvd. E. of Rockies..dm. 24.00 -28.50
cans, cased (45 lbs.) same basis..cs 19.75 -21.50
Iodide, jars .....lb 4.12 - —
Lactate, USP, dms.....lb. .34 - .41
Laurate, bbls. .....lb. .43 - .44
Mandelate, USP, dms., works.....lb. 1.85 - 2.10
Naphthenate, liquid, 4% Cd, dms., dlvd..lb. 23½- —
8% Cd, dms., dlvd.....lb. .28¾- —
Pantothenate, dex., jars.....gram .07¼- —
Phosphate, feeding grade, bgs., works..ton. 75.50 -110.00
food grade, bbls., 10 or over, works. lb. .07 - .07¾
less than 10, works.....lb .08 - .10
medicinal, dibasic, bbls.....lb .13 - .18
monobasic, cryst., bgs., c.l., works, frt. equald..lb. .06½- —
l.c.l., same basis.....lb. .06¾- —
tribasic, bgs., c.l., works....100 lbs. 6.60 - —
bgs., l.c.l., works.....100 lbs. 6.95 - 7.30
Phytate, bgs., works.....lb. .22 - —
Resinate, precip., 5.8% Ca, dms..lb. .20 - —
Silicate, hydrated, bgs., c.l., works .05½- —
l.c.l., works .....lb. .06 - —
Stearate, precip., ctns., c.l., works. lb. .45 - —
l.c.l., works.....lb. .46 - .47
Sulphate (see Gypsum).
Sulphide 76%, bgs., c.l., works..ton 45.00 - —
70%, bgs., c.l., works.....ton 50.00 - —
luminous tins, works.....lb. 1.25 - —
Sulphocarbolate, bbls., dms.....lb. .59 - .60

Calcium-strontium sulphide, phosphorescent, dms., works.....lb. 1.06 - 1.50
fine particle size, works.....lb. 1.50 - 1.75
Calendula flowers, bls.....lb. .80 - .85
Calomel, USP, cryst., dms.....lb. 1.82 - 1.83
fine powd., dms.....lb. 1.97 - 1.98
Camphor, monobromated, dms., kgs..lb. 3.10 - 3.20
Camphor, natura: .....lb. No stocks.
synth., tech., bbls., 2,000 lbs. or more, works..lb. .42 - —
10 bbls. (1,500 lbs.).....lb. .44½- —
smaller lots .....lb. .45 - .55
USP, gran., powd., bbls., 2,000-lb lots..lb. .66 - —
1,000-lb. lots .....lb. .67 - —
smaller lots .....lb. .68 - —
tablets, tins, 2,000-lb lots....lb. .83 - —
1,000-lb. lots .....lb. .84 - —
smaller lots .....lb .85 - —
Canada balsam (see Fir balsam).
Cantharides, Chinese, cs.....lb. 1.25 - 1.30
powd., bxs. .....lb 1.50 - 1.55
Russian, bgs. .....lb 6.25 - 6.50
powd., bxs. .....lb 6.50 - 6.75
Capsicum (see Pepper, red).
Oleoresin, NF VIII, cns.....lb 6.50 - 6.75
Caramel coloring, bbls... .....gal 1.25 - —
Caraway seed, Danish, bgs.....lb. .17 Nom
Dutch, bgs. .....lb. .18 - 18½
Carbazole, 97%, dms., ton lots, works. lb. 1.35 - —
Carbinol butyl, normal, dms., l.c.l., works..lb. .42 - —
secondary, dms., l.c.l., works...lb. .70 - —
Isobutyl, dms., c.l., works.....lb. .51 - —
l.c.l., works.....lb. .52 - —
tanks, works.....lb. .50 - —
Carbinol methylisobutyl, dms., c.l., frt. alld. E..lb. .14½- .15½
l.c.l., same basis.....lb. .15 - .16½
tanks, same basis.....lb. .13 - .14
Bisulphide, 50-gal. dms., c.l., works, frt. alld. to competitive points. lb. .05¾- —
l.c.l., same basis.....lb. .06¾- —
5-gal. dms., c.l., same basis.....lb. .07¾- —
l.c.l., same basis.....lb. .08¾- —
Dioxide, cyls.....lb. .06 - .08
Tetrachloride, CP, dms., c.l.....lb. .11 - —
l.c.l. .....lb. .11½- —
tech., dms., zone 1, c.l., frt. alld..lb. .07 - —
l.c.l., frt. alld.....lb .07½- —
zone 2, c.l., frt. alld.....lb. .07½- —
l.c.l., frt. alld.....lb. .08½- —
zone 3, c.l., frt. alld.....lb. .08 - —
l.c.l., frt. alld.....lb. .09½- —
zone 4, c.l., frt. alld.....lb. .07½- —
l.c.l., frt. alld.....lb .08 - —
USP, chys.....lb .17 - .19

Carbon tetrachloride sales zones are:—1, Conn., Del., Ill., Ind., Ia., Me., Mass., Md., Mich., Minn., Mo., N. H., N. J., N. Y., N. C., O., Pa., R. I., Tenn., Va., W. Va., Wis., and river cities of Burlington, Ia., and Kansas City Kans.; 2, Ala., Ark., Fla., Ga., Kans., La., Miss., Neb., N. D., Okla., S. C., S. D.; 3, Colo., N. Mex., Tex., and Montana points E. of Billings; 4, Ariz., Cal., Idaho, Nev., Ore., Utah, Wash. and Montana points W. of Billings. Zone 4 prices are f.o.b. cars, L. A., Calif., S. F., Calif.; Portland, Ore., and Seattle, Wash.

Cardamom fruit, bleached, bold, cs., futures..lb. 2.03 - 2.05
medium, cs. .....lb. 1.84 - 1.86
decorticated, Guatemalan, cs....lb. 1.50 - 1.55
Indian, cs. .....lb. 1.25 Nom.
green, Alleppey, bgs.....lb. 1.30 - 1.33
Seed (See Cardamom fruit, decorticated).

Carmine, No. 40, NF, bulk, 100 lbs. or more..lb. 5.50 - —
smaller lots.....lb 5.65 - 6.15
Carotene, crystals, research grade, ampuls, pure alpha or beta... 10 mg. 5.00 - —
90% beta-10% alpha, ampuls... 100 mg. 2.00 - —
bulk gram quantities.....gm. 5.00 - —
technical, 1,350,000 A units per gram. gm. .67½- —
dry powder, 3,330 A units per gram. lb. .70 - —
Emulsion (in milk), 500,000 A units per 16-oz. cn..cn. .85 - —
In vegetable oil, 250,000 A units per gram..lb. 37.80 - —
50,000 A units per gram.....lb. 7.87 - —
3,330 A units per gram.....lb. .85 - —
Carvol, bots.....lb. 13.00 -16.00
Cascara sagrada bark, bulk.....lb. .38 - .40
Case-hardening mixture, 30% gran., dms., l.c.l., dlvd..lb. 09¾- —
Casein, dom., acid-precip., bgs., 10,000 lbs. or more, ship't point..lb. .31 - .33
rennet-precip., 10,000 lbs. or more same basis..lb. .24 Nom.
imp., acid-precip., ground, bgs., 100 bgs. or more..lb. .28 - .29½
rennet precip., unground, 100 bgs. or more lb. .36 Nom.
smaller lots.....lb. .37 Nom.
Cassia bark, Batavia, No. 1.....lb. .45 - .46
broken, bls. .....lb. .34 - .35
shortstick, bls. .....lb. .26 Nom.
China, rolls, select, cs.....lb. .10 - .10½
broken, bls.....lb. .07 - .07½
Kwangsi, broken, bls.....lb. .12 - .12½
Saigon, broken, bls.....lb. .32 - .32½
medium, bls. .....lb. .39 - .40
thin, bls.. .....lb. .44 Nom.
Yunnan, bls. .....lb. .15 - .15½
Buds, China, bgs... .....lb. .22 - .22½
Cassia fistula, bskts.....lb. .24 - .25
Castor beans, bgs., June-Aug., ship't, Brazilian ports..long ton. 140.00 -145.00
Oil (see Oil, castor).
Pomace, bgs., c.l., works.....ton. 27.50 - —
Castoreum, nat., cns.....lb. 39.00 - —
synthetic, cns.....lb. 22.00 - —
Catechol, CP, cryst., fib. dms., works. lb. 2.00 - —
resublimed, dms., works.....lb. 3.25 - —
Catnep, bls.....lb. .68 - .70
Celery seed, French, bgs., futures..lb. .25½- .26
Indian, bgs. .....lb. .21 - .21½
futures, bgs.....lb. .20 - .20½
Celluloid scrap (see Pyroxylin scrap).
Cellulose acetate, flake, cns., works, frt alld on 100 lbs. or more..lb .36 - —
granules, ctns., same basis....lb. .42 - —
molding composition, plain colors, pearls, special black, dms., c.l., frt. alld..lb. .47 - —
l.c.l., same basis.....lb. .49 - .51
regular black, dms., l.c.l., same basis..lb. .35 - .39
variegations, dms., l.c.l., same basis..lb .54 - .59
Acetate-butyrate, flake, 14% butyryl content, ctns., 500 lbs. and over, works..lb .52 - —
less than 500 lbs., works..lb. .53 - —
17.5% butyryl content, ctns., 500 lbs. and over, works..lb. .49 - —
less than 500 lbs., works..lb .50 - —
26.5% butyryl content, ctns., 500 lbs. and over, works..lb. .53 - —
less than 500 lbs., works..lb. .54 - —
gran., 37% butyryl content, ctns., 500 lbs. and over, works. lb. .51 - .57
less than 500 lbs., works..lb. .52 - .58
48% butyryl content, ctns., 500 lbs. and over, works..lb. .57 - —
less than 500 lbs., works..lb. .58 - —
molding composition, plain colors, pearls, special black, dms., l.c.l., frt. alld..lb. .56 - .61
regular black, dms., l.c.l., same basis..lb. .47 - .51
variegations, dms., l.c.l., same basis..lb .61 - .66
Triacetate, flake, ctns., works, frt. alld. on 100 lbs. or more..lb. .40 - —
Cerium hydrate, dms., works.....lb. 1.25 - —
Oxalate, NF, bbls., kgs., works..lb. .70 - .72
Oxide, optical grade, bgs., under 100 lbs., works..lb. 2.25 - —
kgs., 100-lb lots, works.....lb. 1.75 - —
Chalk, precip., cosmetic, dentrifice, drugs, bgs., c.l., works..lb. 02¾- 05½
l.c.l., ex whse.....lb .04 - —
paint, ogs., c.l., works.....ton. 40.00 - —
papermakers, bgs., c.l., works, ton. 32.50 -40.00
rubber makers, bgs. c.l., works.. ton. 30.00 - —
Chamomile, Hungarian, cs.....lb. .51 - .55
Roman, bls. .....lb. 1.50 - 1.75
Charcoal, hardwood, briquets, bulk, c.l., works..ton. 49.50 - —
bgs., c.l., works.....ton. 54.50 -55.50
granular, bgs., incls. c.l., works, ton. 50.50 - —
lump, bulk, c.l., works.....ton. 39.50 -43.50
bgs., extra, returnable, c.l., works, ton. 42.50 -45.50
screenings, bgs., works.....ton. 33.50 - —
Pinewood, gran., powd., bgs., c.l., works, South..ton. 40.00 - —
l.c.l., works.....ton. 50.00 -60.00
lump, bgs., c.l., works, South..ton. 25.00 - —
Willow, powd., bbls.....lb. .06 - .07
Chestnut extract, 25% tannin, bbls., c.l., works..lb. .0465- —
l.c.l., works.....lb. .0495- —
tanks .....lb. .0350- —
powd., 65% tannin, bgs., extra, c.l., works..lb. .1165- —
l.c.l., works.....lb. .1170- .1180
China clay, dom., dry-grd., air-float, 95-97% 300 mesh, bgs., c.l., works..ton. 12.50 -13.00
l.c.l., works.....ton. 13.50 -14.00
bulk, c.l., works.....ton. 9.50 -10.00
95% 200 mesh, bgs., c.l., works..ton. 10.00 -12.00
l.c.l., works.....ton. 11.00 -16.00
wet-grd., silk-bolt, 99½% 325 mesh, bulk, c.l., works..ton. 12.00 - —
paper bgs., c.l., works..ton. 15.00 - —
imported, white, lump, bulk, c.l., ex dock Balto., Boston, Norfolk, Phila..net ton. 16.00 -35.00
powd., bgs., c.l., ex dock....ton. 45.00 - —
l.c.l., ex whse.....ton. 50.00 -55.00
Chloral, dms., works.....lb. .45 - .50
Hydrate, jars.....lb. .90 - .95
Chlordane, agricultural, dms., c.l., frt. alld..lb. 1.50 - —
l.c.l., frt. alld.....lb. 1.55 - 1.70
refined, dms., c.l., frt. alld.....lb. 1.65 - —
l.c.l., frt. alld.....lb. 1.70 - 1.85
technical, cns., c.l., works.....lb. 1.55 - —
l.c.l., works.....lb. 1.60 - 1.80
Chlorinated rubber, standard, ctns., c.l., works..lb. .40 - —
l.c.l., works.....lb. .43 - —
Chlorine, liquid, cyls., c.l., works..lb. .07 - .12
l.c.l., stock points.....lb. .08 - .15½
tanks, single units, works, frt. equald..100 lbs. 2.25 - —
multiple units, 3 cars, works, frt. equald..100 lbs. 2.35 - —
2 cars, same basis....100 lbs. 2.15 - —
1 car, same basis.....100 lbs. 3.75 - —


# COLORFUL CHROME

Chromium compounds find one of their most important applications in pigments for the paint, printing ink and ceramic industries. For over a century Mutual Chromium Chemicals have been used in virtually all brilliant, resistant yellows, greens and oranges. Many bright reds with high covering power are also produced from Chromium Chemicals. Permanent blues, while not yet commercially available, may also be made.

Chrome yellows are available in a wide variety of shades ranging from the palest canary to deep chrome orange, and constitute a large percentage of the yellow pigments used industrially.

The most stable green known is Chromic Oxide ($Cr_2O_3$) which is unaffected by strong alkalies, mineral acids or hydrogen sulphide, while the brightest sunlight and high temperatures have no effect on it. Hydrated Chrome Oxide (Guignet green) is noted for a brilliant emerald shade of great beauty.

The green shutters that dot the countryside and the bright yellow bowls of grandma's kitchen have been followed by permanent green granules for roofing and the contrasting yellow signs on our highways . . . all from Chrome pigments.

Mutual's plants in Baltimore and Jersey City, supplemented by dealers' warehouse stocks, are serving the leading pigment manufacturers of the United States and Canada.

•

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**Bichromate of Potash • Chromate of Potash**
**Chromic Acid**

**MUTUAL CHEMICAL COMPANY OF AMERICA**
**270 Madison Avenue, New York 16, N. Y.**

MUTUAL CHEMICAL CO. OF AMERICA — NEW YORK, N.Y.

*Mutual* CHROMIUM CHEMICALS

Chloroform, tech., dms.....lb. .20 - .23
USP, dms.....lb. .30 - .33
Chloro(1)-2-Toluidine, bbls. .....lb. 1.38 - —
Chloropicrin, com'l, bots., ex whse..lb. 1.25 - —
cyls., 180-lbs., works, frt. alld..lb. .50 - —
100-lbs., same basis.....lb. .82 - —
25-lbs., ex whse.....lb. 1.00 - —
Cholesterol, USP, fib. dms., 100-lb. lots. lb.12.00 -14.38
jars, dms., smaller lots.....lb.14.75 -15.55
Choline chloride, fib dms., works..lb. 3.00 - 3.10
feed grade, fib. dms., works....lb. 2.20 - —
Dihydrogen citrate, fib. dms., works, lb. 3.00 - 3.10
Chromium acetate, powd., 72% Cr., bbls., works..lb. No stocks
solut., 7½%, bbls., cs.....lb. .09¼- —
8½%, bbls., cs.....lb. .09¾- —
Cake, bulk, c.l. works.....ton.16.00 - —
Fluoride, bbls., works.....lb. .24 - .27
Green (see Green, chrome).
Oxide (see Green, chromium oxide).
Oleate, bbls. .....lb. .54 - —
Trioxide (see Acid, chromic).
Yellow (see Yellow, chrome).
Chrysarobin, bots. .....lb. 7.11 - —
Cinchona bark, Ucr. reu, quill, 30-in., cs..lb. 1.26 Nom.
yellow, broken, bgs.....lb. .35 - .40
Cinchonidine, small cryst., cns.. 100 ozs..oz. .95 - —
Cinchonine, large cryst., cns. 100 ozs. oz. .69 - —
small cryst., cns., 100 ozs.....oz. .65 - —
Sulphate, NF, cns., 100 ozs.....oz. .42 - —
Cinchophen, NF, heavy, dms., works, lb. 4.20 - 4.30
standard, dms., works.....lb. 4.00 - 4.10
Cinnamic alcohol (see Alcohol, cinnamic).
Aldehyde, cbys., cns., dms.....lb. .82 - 1.25
Cinnamon, Ceylon, No. 2, bls.....lb. .36 - .37
Citral, bots., cns.....lb. 3.75 - 5.00
Citronellal, bots., dms .....lb. 2.75 - —
Citronellol, bots., dms.....lb. 3.85 - 4.75
Clover tops, red, dom., bgs.....lb. .58 - .60
imported, bgs .....lb. No stocks
Cloves, Madagascar, bls.....lb. .09 - .09½
futures, bls. .....lb. .08½- .09
Zanzibar, bls. .....lb. .15½- .16
Coaltar coal-gas, water-gas crude, resale, dms., c.l., works..dm.10.00 - —
l.c.l. works.....dm.11.10 - —
tanks, works.....gal. .14 - —
refd., bbls., c.l., works.....bbl.11.10 - —
l.c.l., works.....bbl.11.60 - —
tanks, works.....gal. .15 - —
Cobalt acetate, bbls., kgs., dlvd..lb. .33¾- —
Carbonate, powd., bgs., works....lb. 1.68 - —
feed, grade, 49½% Co, kgs.....lb. 1.38 - —
Chloride, kgs., works.....lb. .87½- —
feed grade, 24.5% Co, kgs.....lb. 1.25 - —
Hydrate bbls. .....lb. 2.01 - —
feed grade, 62% Co, kgs.....lb. 2.01 - —
Linoleate, paste, 6% Co, dms....lb. .56 - —
solid 8½% Co, dms.....lb. .65 - —
8% Co, dms.....lb. .61¼- —
Naphthenate, solid, 6% Co, dms., dlvd..lb. .37 - —
Nitrate, feed grade, 20.4% Co, bbls. lb. .75¾- —
Oxide, black, kgs.....lb. 1.27½- 1.30
Phosphate feed grade, 31% Co, kgs. lb. 1.20½- —
Resinate, precip., 7.5% Co, dms...lb. .38½- —
Sulphate dms. .....lb. .65 - —
feed grade, 21% Co kgs.....lb. 1.00 - —
Cobalt salts, feed grade quotations are f.o.b. Phila., Cleve. or N. Y.
Cobalt-ammonium sulphate, 14% Co. kgs...lb. .75 - —
Cocaine hydrochloride, cns., 100-oz. lots..oz. 9.75 - —
Cochineal, gray, bgs.....lb. .67 - .68
silver, Teneriffe, bgs.....lb. .69 - .70
Cocillana bark, bgs.....lb. .19 - .20
Cocoa butter, bgs. .....lb. .96 - .97
Codeine, cns., 100 ozs..... .....oz 13.25 - —
Hydrochloride, cns., 100 ozs.....oz.11.85 - —
Phosphate, cns., 100 ozs.....oz.10.25 - —
Sulphate, cns., 100 ozs.....oz 10.75 - —
Codliver oil (see Oil, codliver).
Cohosh black, root, bls.....lb. .20 - .21
Blue, bls. .....lb. .19 - .20
Colchicum seed, bgs., futures.....lb. 3.50 - 4.00
Colchicine, bots., cns.....oz. No stocks
Collodion, USP, dms.....lb. .24 - .29
Flexible, USP, dms.....lb. .25½- .30½
Colocynth pulp, bls.....lb. .50 - .52
Colombo root, bls.....lb. .18 - .19
Coltsfoot leaves, bgs.....lb. .43 - .44
Condurango bark, bgs., futures....lb. .21 - .23
Copaiba balsam, cns., dms.....lb. .65 - .68
Copper acetate, cupric, bbls., works lb. .28 - —
smaller containers, works.....lb. .29 - .30
Carbonate, 52-54%, bbls.....lb. .24 - .26
Chloride, anhyd., bbls.....lb. .27 - —
crystals, bbls. .....lb. .18¼- —
Cyanide, tech., bbls.....lb. .43 - —
Hydrate, dms., dlvd. E. Miss.....lb. .26¼- .26¾
Metal, electrolytic .....lb. .21½- —
Naphthenate, liquid, 8% Cu, dms., dlvd..lb. .22½- —
Nitrate, tech., cryst., bbls., works, lb. .25 - .28
Oleate, liquid, 8.5% Cu, bbls.....lb. .35 - —
solid, 10% Cu, bbls.....lb. .43½- —
12.5% Cu, bbls.....lb. .44½- —
Oxide, black, bbls., works.....lb. .28 - .30
red, com'l, bbls., works.....lb. .30 - .32½
Oxychloride-sulphate, bgs., frt. alld.lb. .21 - .24
Resinate, precip., 8.5% Cu, dms..lb. .21½- —
Stearate, bgs., works .....lb. .33½- —
Sulphate, cryst., 99%, bgs. c.l., works..100 lbs. 7.60 - —
l.c.l. .....100 lbs. 7.85 - 8.00
monohydrated, 35% dms, c.l., dlvd. 100 lbs.12.55 -12.80
l.c.l., dlvd.....100 lbs.13.55 - —
tribasic, dealers, bgs., works, c.l. lb. .21½- .22½
l.c.l., works.....lb. .23 - .23½
Copperas, cryst., gran., bgs., c.l., works..ton.17.00 - —
l.c.l., works.....100 lbs. 1.55 - 2.00
bbls., c.l., works.....ton.20.00 - —
bulk, c.l., works.....ton 14.00 - —
Copra, c.i.f., Pacific ports.....ton.300.00 - —
Atlantic or Gulf ports.....ton.306.00 - —
Coriander seed, Argentine, bgs, futures. lb. .05½- .06
Persian, bgs. .....lb. .21½- .22
Moroccan, bgs. .....lb. .06¾- .07¼
Corn sugar, tanners, chipped, paper bgs., c.l., 60,000 lbs. min..100 lbs. 6.50 - —
bbls., c.l., same basis..100 lbs. 6.64 - —
Syrup, 42°, bbls., c.l.....100 lbs. 6.95 - —
l.c.l. .....100 lbs. 7.10 - —
Cornsilk, bls. .....lb. .21 - .22
Corrosive sublimate, NF, cryst., dms., 50 lbs. or more..lb. 1.68 - —
gran., powd., dms., 50 lbs. or more..lb. 1.53 - —
Cottonroot bark, bls.....lb. .39 - .42
Cottonseed hull ash, 32-36% potash, bgs., dlvd..unit-ton. 1.75 - —
Meal, 41% protein, sacked, c.l., mills, S. E..ton.88.50 -89.00
Coumarin, cns., 25 lbs.....lb. 3.60 - —
smaller lots .....lb. 3.05 - 3.15
Cramp bark, NF, bls.....lb. .80 - .85

Cream of tartar, dom., USP, gran, or powd., bbls., 5,000 lbs. one shipt..lb. .35½- —
bbls., lkgs., smaller lots.....lb. .36 - 36½
Creosote, beechwood, bots., cbys....lb. 1.15 - 1.20
Coaltar, crude, tanks, works.....gal. .19½- —
refined, dms., c.l., works.....gal. .58½- —
l.c.l., same basis.....gal. .30 - —
tanks, same basis.....gal. .25 - —
solution, 80%, tanks, works..gal. .20 - —
Hardwood, NF, bots., cbys.....lb. .85 - —
Pinewood, dms.....gal. .31 - .32
Creosote carbonate, bots., cbys.....lb. 2.35 - 2.40
Cresol, tech., dms., c.l., works, frt. equald..lb. .19 - .19¾
l.c.l., same basis.....lb. .19¼- .19½
tanks, same basis.....lb. .18¼- .18½
USP, dms., c.l., same basis.....lb. .18¾- .19¼
l.c.l., same basis.....lb. .19¼- .19¾
tanks, same basis.....lb. .18 - .18½
Crotonaldehyde, 91-93% dms., 55 and 110 gals., l.c.l., works..lb. .16½- .17
5 and 10-gals., l.c.l., works....lb. .22 - —
Cryolite, nat., dealers, bgs., bbls., c.l., works..100 lbs.12.75 - —
bbls., l.c.l., works.....100 lbs.13.75 -14.75
Cube root, powd., 5% rotenone, bbls., works..lb. .38 - —
4% rotenone, bbls., works.....lb. .30½- —
Cubeb berries, XX, bgs.....lb. .50 - .55
powd., cs .....lb. .70 - .75
Culvers root, bbls.....lb. .60 - .70
Cumin seed, Cyprian, bgs.....lb. No stocks
Indian, bgs. futures.....lb. .40 - .41
Italian, bgs. .....lb. .08½- .09
Moroccan, bgs .....lb. No stocks
Persian, bgs. .....lb. .22½- .23
Syrian, bgs. .....lb. .22 Nom.

Cutch, extract, 65% tan., bgs., ex dock..lb. .09½- —
Cyanamide, fertilizer mixing grades, 20.6% N., gran., bulk, Niagara Falls, Ont., contracts, bulk.. unit-ton. 2.55 - —
pulv., 21% N., bgs., same basis, unit-ton. 2.45 - —
Cyclohexane, tech., dms., c.l., works..lb. .12½- —
l.c.l., works .....lb. .13 - —
tanks, works .....lb. .11½- —
Cyclohexanol, tech., dms., c.l., works..lb. .21½- —
l.c.l., works .....lb. .22 - —
tanks, works .....lb. .20 - —
Cyclohexanone, tech., dms., c.l., works. lb. .26½- .30
l.c.l., works.....lb. .27 - .31
tanks, works.....lb. .25 - .29
Cyclohexylamine, dms., works.....lb. .32 - —
Cyclopropane, USP, cyls., dlvd...gal. .27 - —

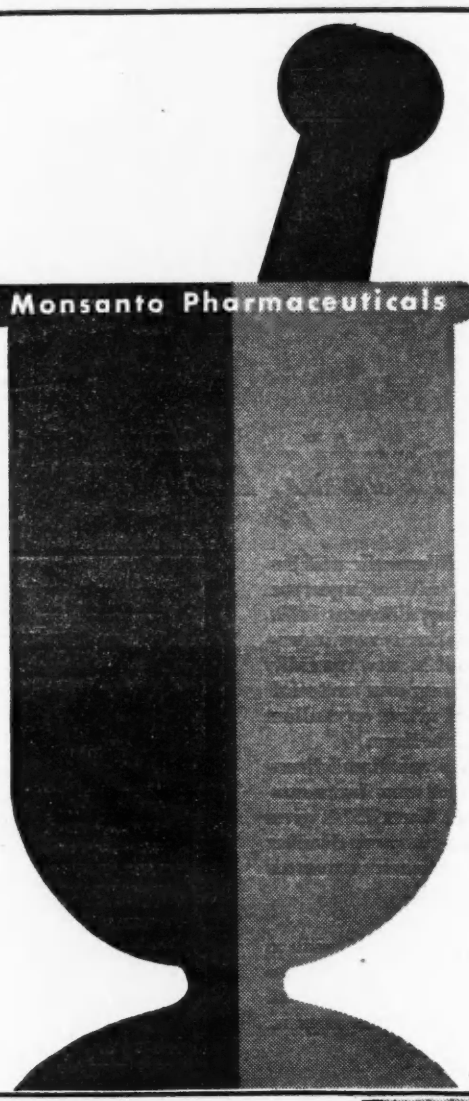
## D

Damiana leaves, bls.....lb. .50 - .55
Dandelion root, bls.....lb. .55 - .60
DDT, fiber, dms., c.l., works.....lb. .34 - —
ton lots, works.....lb. .36 - —
dms., smaller lots.....lb. .42½- —
Decanol, normal, tech., dms., dlvd..lb. .35 - —
Deertongue leaves, bls.....lb. .35 - .40
Defluorinated phosphate, 65% b.p.l., paper bgs., works..ton.41.65 -52.50
Rock, paper bgs., works.....ton 34.25 - —

Degras, common, bbls.....lb. .10 - .11
Neutral, less 2% ffa., bbls.....lb. .16 - .18
over 2% ffa., bbls.....lb. .15 - .17
Derris root (see Cube root).
Dextrin, British gum, bgs., c.l..100 lbs. 8.69 - —
Chicago .....100 lbs. 8.08 - —
l.c.l. .....100 lbs. 8.84 - —
Corn, Canary, bgs., c.l.....100 lbs. 8.43 - —
Chicago .....100 lbs. 7.82 - —
l.c.l. .....100 lbs. 8.58 - —
dark, bgs., c.l. .....100 lbs. 8.53 - —
Chicago .....100 lbs. 7.92 - —
l.c.l. .....100 lbs. 8.68 - —
white, bgs., c.l.....100 lbs. 8.28 - —
Chicago .....100 lbs. 7.67 - —
l.c.l. .....100 lbs. 8.43 - —
Above prices are for dextrin in paper bgs; cotton bgs., 17c. higher.
Potato, dom., bgs.....lb. 12½- .13
imp., bgs.....lb. .1165- .1130
Diacetone (see Alcohol, diacetone).
Diacetyl, flavor grade, bots.....lb 5.20 - 5.85
laboratory grade, bots....100 grams 4.50 - —
tech., bots., works.....lb. 3.00 - —
Diamyl ether (see Ether, amyl).
Phthalate, dms., tanks.....lb. No price
Diamylphenols, mixed, dms., c.l., works..lb. .31 - —
l.c.l., works.....lb. .32 - —
tanks, works.....lb. .30 - —
Dianisidin, dms. .....lb. 1.54 - —
Diatomaceous earth, dom., bgs., c.l., Atlantic coast..ton.50.00 -52.00
California .....ton.38.00 -40.00
l.c.l., ex whse.....ton.80.00 - —




1901
Saccharin, U.S.P.




1948
Saccharin, U.S.P.
Benzyl Benzoate, U.S.P.
Glycerophosphates
Sodium Benzoate, U.S.P.
Caffeine, U.S.P.
Sodium Phosphate, DI
Methyl Salicylate, U.S.P.
Chloral Hydrate, U.S.P.
Phenol, U.S.P.
Benzoic Acid, U.S.P.
Acetanilid, U.S.P.
Ferric Phosphates
Salol (Phenyl Salicylate)
Magnesium Phosphates
Salicylic Acid, U.S.P.
Phenolphthalein, U.S.P.
Chloramine-T
Phosphoric Acid
Calcium Phosphate, DI
Acetophenetidin, U.S.P.
Potassium Ammonium Phosphate
Sodium Salicylate, U.S.P.
Sulfanilamide, U.S.P.
Acetyl Salicylic Acid, U.S.P. (Aspirin)

Starting with one product — saccharin — in 1901, Monsanto's line of pharmaceutical chemicals has grown with each successive year until now a large and varied selection is available to drug manufacturers.

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Firm_____
Address_____
City_____ State_____

SERVING INDUSTRY...WHICH SERVES MANKIND

## Diatomaceous Earth—Dyes, Coaltar

Diatomaceous earth, dom., purified, bgs., c.l., Atlantic coast..ton.62.00 - —
California .....ton.50.00 - —
l.c.l., ex whse.....ton.90.00 - —
Imported, Algerian, bgs., c.l., Atlantic coast..ton. No prices
Mexican, white, bgs., c.l., Atlantic coast..lb. .03 - —
l.c.l., Atlantic coast.....lb. .06 - —
Dibutyl phthalate, dms., c.l.....lb. .37 - .38½
l.c.l. .....lb. .38 - .39
tanks .....lb. .35½- .37
Sebacate, dms., c.l., works.....lb. .74½- —
l.c.l., works .....lb. .75 - —
tanks, works .....lb. .73 - —
Tartrate, dms., works, frt. alld...lb. .92 - 1.02
Dibutylamine, dms., c.l., works.....lb. .52½- —
l.c.l., works.....lb. .53½- —
tanks, works.....lb. .50 - —
Dibutylmetacresol, dms., c.l., works. lb. .79 - —
l.c.l., works .....lb. .80 - —
Dibutylparacresol, dms., c.l., works. lb. .94 - —
l.c.l., works .....lb. .95 - —
Dichloroanilin, dms., works.....lb. .75 - —
Dichlorodiphenyldichloroethane, fib. dms., c.l., works..lb. .42½- —
ton lots, works.....lb. .45 - —
tins, small lots, works.....lb. .48 - .50
Dichlorodiphenyltrichloroethane (see DDT).
Dichloroethyl ether (see Ether, dichloroethyl).
Dichlorophenol, dms., frt. equald....lb. .28 - —
Dicoumaral, bots., works.....lb.18.00 - —
Dicyclohexylamine, dms., works....lb. .38 - —
Dicyclohexylphthalate, fib. dms., c.l., works..lb. .42½- —
l.c.l., same basis.....lb. .43 - —
Diethanolamine, dms., c.l., frt. alld. E..lb. .26 - —
l.c.l., same basis.....lb. .27 - —
smaller containers, same basis....lb. .30 - —
tanks, same basis.....lb. .24½- —
Diethyl carbonate, dms., l.c.l.....lb. .46½- —
Oxalate, dms., c.l.....lb. .35½- —
l.c.l. .....lb. .36½- —
tanks .....lb. .34 - —
Phthalate, dms., c.l., frt. equald..lb. .31½- .33½
dms., l.c.l., frt. equald.....lb. .32½- .34
tanks, frt. equald.....lb. .30 - .32
Sulphate, dms., c.l., works.....lb. .14 - —
l.c.l., works .....lb. .15 - —
tanks, works .....lb. .13 - —
Diethylamine, dms., c.l., works....lb. .69 - —
l.c.l., works .....lb. .71 - —
tanks, works .....lb. .65 - —
Diethylaminoethanol, dms., l.c.l., works, frt. alld. E. of Miss..lb. .75 - —
Diethylaniline dms. .....lb. .45 - —
Diethyleneglycol, dms., c.l., frt. alld. E..lb. .16½- —
l.c.l., same basis.....lb. .17 - —
tanks, same basis.....lb. .15 - —
Diethylether, dms., l.c.l., works...lb. .40 - —
Monobutylether, dms., c.l., works.lb. .26 - —
l.c.l., works.....lb. .26½- —
tanks, works.....lb. .24½- —
Monobutylether acetate, dms., c.l., works..lb. .27½- —
l.c.l., works.....lb. .28 - —
Monoethylether, dms., c.l., works..lb. .18 - —
l.c.l., works.....lb. .18½- —
tanks, works.....lb. .16½- —
Diethyleneglycol monoethylether acetate, dms., c.l., works..lb. .24 - —
l.c.l., works.....lb. .24½- —
Monomethylether, dms., c.l., works. lb. .22 - —
l.c.l. .....lb. .22½- —
tanks .....lb. .20½- —
Diethylenetriamine, dms., c.l., works.. lb. .51½- —
l.c.l., works.....lb. .52 - —
tanks, works.....lb. .50 - —
Diethylstilbestrol, bots. .....kilo.300.00 - —
Digitalin, cryst., bots.....gram.18.00 -19.00
powd., bots. .....gram. 1.25 - 1.75
Digitalis leaves, dms.....lb. 1.05 - 1.15
Stearate, bbls., c.....lb. .49 - —
Diglycol laurate, dms.....lb. .33 - —
Oleate, light, bbls., c.l.....lb. .33 - —
Dihydroxydichlorodiphenylmethane, dms..lb. .95 - 1.00
smaller containers .....lb. 1.05 - 1.40
Di-isobutyl ketone, dms., c.l., works.lb. 17½- —
l.c.l., works.....lb. .18 - —
tanks .....lb. .16 - —
Di-isobutylene, dms., c.l., works....lb. .07 - —
l.c.l., works .....lb. .07½- —
tanks, works .....lb. .05½- —
Dillseed, decorticated, bgs.....lb. .16 Nom.
dewhiskered, bgs. .....lb. .11½- .12
Dimethyl phthalate, dms., c.l., dlvd. lb. .27½- —
l.c.l., dlvd. .....lb. .28 - —
tanks, dlvd. .....lb. .26 - —
Sebacate, dms., c.l., works....lb. .86¼- —
l.c.l., works .....lb. .86¾- —
tanks, works .....lb. .85¼- —
Sulphate, ret. 55-gal. dms., c.l., works..lb. .15 - —
l.c.l., works .....lb. .16 - —
ret. 10-gal. dms., works.....lb. .16½- —
Dimethylamine, anhyd., cyl., works, basis 100%..lb. .38½- .46½
30%-40%, dms., c.l., works, basis 100%..lb. .38 - —
l.c.l., works, basis 100%.....lb. .38½- —
tanks, works, basis 100%.....lb. .33 - —
Dimethylanilin, dms., c.l.....lb. .21 - .23¾
l.c.l. .....lb. .25 - .26¾
Dinitroanilin, dms., frt. equald....lb. .50 -
Dinitrobenzene, bbls.....lb. .16 - .21¾
Dinitrochlorobenzene, dms.....lb. .14 - .17
Dinitrophenol, bbls.....lb. .22 - .26¾
Dinitrotoluene, oily, dms.....lb. .07 - .08½
refd., dms.....lb. .17¾- .18¾
Dinonylnaphthalene, tanks, works.lb. .15 - —
Dioctyl phthalate, dms., c.l., frt. alld. lb. .433 - —
l.c.l., frt. alld.....lb. .443 - —
tanks, frt. alld.....lb. .418 - —
Diorthotolylguanidin, dms., ton lots, dlvd..lb. .48 - —
smaller lots, dlvd.....lb. .50 - —
Dioxan, dms., c.l., frt. alld.....lb. .25 - —
l.c.l., same basis.....lb. .25½- —
tanks, same basis.....lb. .23½- —
Dip oil (see Tar acid oil).
Dipentene, dest.-dist., dms., incl., c.l. works, South.....gal. .35 - .53
l.c.l., same basis.....gal. .36 - .55
N. Y. whse.....gal. .50 - —
steam-dist., dms., c.l., whse., NYC. gal. .39 - —
l.c.l., same basis.....gal. .53 - .62
Diphenyl, bbls., c.l., works.....lb. .15 - —
l.c.l., works .....lb. .16 - .20
Oxide, perfume grade, cns.....lb. .48 - .61
dms .....lb. .45 - .56
Diphenylamine, bbls. .....lb. .25 - —
Diphenylguanidin, dms., ton lots...lb. .35 - —
smaller lots.....lb. .40 - —
Ditertiarybutylmetacresol, dms., c.l., works..lb. .29 - —
l.c.l., works .....lb. .30 - —
Ditertiarybutylparacresol, dms., c.l., works..lb .94 - —
l.c.l., works .....lb. .95 - —
Divi-divi 45% tannin, bgs., bls., c.l., U.S. ports, ex dock..ton.64.00 -66.00
Divinylbenzene, 18%, dms., c.l., wks.lb. .25 - —
l.c.l., works.....lb. .26 - —
tanks, works.....lb. .24 - —
40%, dms., c.l., works.....lb. .69 - —
l.c.l., works.....lb. .70 - —
Doggrass root, dom., cut, bls.....lb. .20 - .22
imp., N.F., cut, bls.....lb. .32 - .33
Dogwood, Jamaica, bark, bls.....lb. .12 - .14
Dragon's blood, drops, cs.....lb. .45 - .47
mass, cs.....lb. 1.50 - 1.55
reeds, cs..... No stocks
Dyes, coaltar, certified colors for foods, drugs and cosmetics, 1-lb. lots:—
Blue, FD&C, No. 1, cns.....lb.14.85 - —
No. 2, cns.....lb.14.85 - —
Green, FD&C, No. 1, cns.....lb.14.85 - —
No. 2, cns.....lb.19.25 - —
No. 3, cns.....lb.30.25 - —
Orange, FD&C, No. 1, cns.....lb. 3.20 - —
No. 2, cns.....lb. 4.00 - —
Red, FD&C, No. 1, cns.....lb. 6.60 - —
No. 2, cns.....lb. 4.00 - —
No. 3, cns.....lb.19.25 - —
No. 4, cns.....lb. 6.35 - —
No. 32, cns.....lb. 4.55 - —
Yellow, FD&C, No. 1, cns.....lb. 9.35 - —
No. 3, cns.....lb. 2.90 - —
No. 4, cns.....lb. 2.90 - —
No. 5, cns.....lb. 3.45 - —
No. 6, cns.....lb. 3.45 - —
Dyes, coaltar, certified colors for drugs and cosmetics, 1-lb. lots:—
Black, D&C, No. 1, cns.....lb 9.15 - —
Blue, D&C, No. 4, cns.....lb.13.55 - —
Brown, D&C, No. 1, cns.....lb.13.55 - —
Green, D&C, No. 5, cns.....lb.13.55 - —
No. 6, cns.....lb.13.55 - —
No. 7, cns.....lb.12.45 - —
Orange, D&C, No. 3, cns.....lb 9.15 - —
No. 4, cns.....lb.16.85 - —
No. 5, cns.....lb. 4.75 - —
No. 10, cns.....lb.17.40 - —
Red, D&C, No. 8, cns.....lb. 3.10 - —
No. 9, cns.....lb. 3.10 - —
No. 10, cns.....lb. 2.50 - —
No. 11, cns.....lb. 1.85 - —
No. 12, cns.....lb. 2.50 - —
No. 17, crs.....lb. 9.15 - —
No. 18, cns.....lb.20.15 - —
No. 21, cns.....lb. 3.95 - —
No. 22, cns.....lb. 9.15 - —
No. 28, cns.....lb.20.70 - —
No. 33, cns.....lb.14.65 - —
Violet, D&C, No. 1, cns.....lb.13.55 - —
No. 2, cns.....lb.13.55 - —
Yellow, D&C, No. 7, cns.....lb. 9.15 - —
No. 8, cns.....lb. 9.15 - —
No. 10, cns.....lb.11.35 - —
No. 11, cns.....lb.11.35 - —
No. 22, cns.....lb. 9.15 - —
No. 33, cns.....lb.14.65 - —
No. 37, cns.....lb.13.55 - —
Dyes, coaltar, certified colors for external use drugs and cosmetics, 1-lb. lots:—
Green, Ext. D&C, No. 1, cns.....lb.13.55 - —
Red, Ext. D&C, No. 1, cns.....lb.11.35 - —
No. 3, cns.....lb.24.00 - —
Blue, Ext. D&C, No. 1, cns.....lb.13.55 - —
Yellow, Ext. D&C, No. 1, cns....lb. 9.15 - —
Dyes, coaltar, for general use in cloth dyeing (numbers are those of the Colour Index scale or prototype)
26 Chrysodine G.....lb. .46 - .48
27 Orange G.....lb. .58 - .61
31 Amido naphthol red G.....lb. .50 - .73
36 Alizarine yellow 2G.....lb. .69 - —
40 Alizarine yellow R.....lb. .85 - —
57 Amido naphthol red 6B.....lb. .85 - .89
78 Ponceau R.....lb. .58 - —
151 Orange II.....lb. .50 - —
165 Red lake C.....lb. 1.05 - —
176 Red lake A.....lb. .68 - .73
179 Azo rubine.....lb. .79 - —
189 Diamond blue 3B.....lb. .69 - .73
185 Cochineal red A.....lb. .73 - —
202 Chrome blue black R.....lb. .46 - —
203 Chrome black T.....lb. .54 - —
208 Sulphon acid blue R.....lb. .72 - .73
216 Acid alizarin red B.....lb. .65 - —
234 Resorcin brown.....lb. .70 - 1.09
246 Naphthol blue black.....lb. .58 - .61
278 Benzo fast red 8BL.....lb. 2.73 - 3.33
289 Sulphon cyanine 5R extra...lb. .84 - .99
299 Diamond black F.....lb. 1.05 - 1.07
304 Nerol 2B.....lb. 1.51 - —
326 Benzo fast orange S.....lb. 1.33 - 2.23
332 Bismarck brown R.....lb. .59 - .61
365 Chrysophenine .....lb. 1.75 - —
382 Diamine scarlet B.....lb. 1.33 - —
401 Diamine black BH.....lb. .44 - .46
406 Benzo blue 2B conc.....lb. .85 - 1.21
419 Diamine fast red F.....lb. .88 - 1.07
420 Diamine brown M.....lb. .69 - .84
448 Benzo purpurine 4B.....lb. .80 - —
518 Diamine sky blue FF.....lb. 1.82 - —
561 Trisulphon brown B.....lb. 1.45 - —
581 Direct deep black EW extra.lb. .61 - .65
593 Diamine green B.....lb. .51 - .73
598 Congo brown G.....lb. 1.09 - —
620 Sun yellow.....lb. .69 - .73
639 Xylene light yellow.....lb. 1.45 - 1.52
640 Tartrazine .....lb. 1.11 - —
655 Auramine .....lb. 1.52 - 1.54
657 Malachite green.....lb. 1.64 - —
662 Brilliant green.....lb. 2.42 - —

# Hooker

# Monochloracetic Acid

Every chemist knows of monochloracetic acid because this versatile chemical is such an important intermediate, is useful in so many different fields. But you may not know that Hooker is now in production on monochloracetic acid. A new, specially constructed plant is now turning out technical grade monochloracetic acid—a white crystalline material in fine, free flowing flake form.

Listed below are some of the physical and chemical characteristics and suggested uses for monochloracetic acid. Technical Data Sheet 752-A gives more complete listing of properties and Hooker specifications. It will be sent you when requested on your company letterhead.

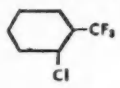
**DESCRIPTION:** White crystalline material with a strong sweetish odor. Corrosive to the skin. Very soluble in water and benzene; soluble in most organic solvents.

**PHYSICAL DATA:** Mol. Wt. .....94.5
M. P. .....61.6°C
B P .....189°C

**USE:** ..... Intermediate in manufacture of carboxymethyl cellulose, 2, 4-dichlorophenoxy acetic acid, cyano acetate, indigoid and thioindigoid dyes, ammonium thioglycollate, thioglycollic acid, aminoacetic acid and other chemicals of commercial importance. It has been suggested as a preservative alone or in connection with other compounds for hides, skins, etc.

## HOOKER RESEARCH Presents

### o-CHLOROBENZOTRIFLUORIDE
### (o-Chlorotrifluoromethylbenzene)




Molecular Weight .....180.56
Freezing Point .....-7.4°C
Boiling Point .....152.°C
Specific Gravity, 15.5°/15.5°C .....1.379
Refractive Index, n20/D .....1.456

Another new Hooker product is offered to the chemical processing industries. Its properties indicate the possibility of many applications as a chemical or dye-stuff intermediate, solvent or dielectric fluid. o-Chlorobenzotrifluoride is a water-white, mobile, aromatic liquid. It is characterized by the trifluoromethyl radical which is generally very stable to heat, light and to chemical reaction.

Hooker o-chlorobenzotrifluoride is available in experimental quantities. Technical Data Sheet No. 363 describes more completely its physical and chemical properties. Please use your company letterhead when requesting sample or literature.

HOOKER ELECTROCHEMICAL COMPANY

HOOKER CHEMICALS

B-560

1 FORTY-SEVENTH ST., NIAGARA FALLS, N. Y.
NEW YORK, N. Y. • WILMINGTON, CALIF. • TACOMA, WASH.

CAUSTIC SODA • PARADICHLORBENZENE • MURIATIC ACID • CHLORINE • SODIUM SULFIDE • SODIUM SULFHYDRATE

| | | | |
|---|---|---|---|
| Dyes, coaltar, general use, 667 Brilliant milling green B | lb. | 3.15 | - — |
| 671 Glaucine | lb. | 1.30 | - 1.33 |
| 680 Methyl violet B | lb. | .87 | - .90 |
| 681 Crystal violet | lb. | 1.91 | - 1.97 |
| 698 Formyl violet S4B | lb. | 1.28 | - 1.33 |
| 729 Chrome azurol B | lb. | 3.03 | - — |
| 729 Victoria blue B | lb. | 2.48 | - — |
| 737 Wool green S | lb. | 1.40 | - 1.80 |
| 749 Rhodamine B | lb. | 3.85 | - — |
| 814 Chloramine yellow | lb. | 2.33 | - — |
| 841 Safranine | lb. | 2.17 | - — |
| 865 Nigrosine WSJ 78 | lb. | .53 | - — |
| 922 Methylene blue GXX | lb. | 1.21 | - — |
| 969 Hydron blue R | lb. | .61 | - — |
| 978 Sulphur black T extra | lb. | .24 | - .26 |
| 1027 Alizarin VI | lb. | .64 | - — |
| 1034 Alizarin red S | lb. | 2.37 | - — |
| 1054 Alizarin saphirol B | lb. | 2.18 | - 2.30 |
| 1078 Alizarin cyanine green | lb. | 2.42 | - 2.54 |
| 1085 Alizarine blue black B | lb. | 1.88 | - 1.94 |
| 1090 Indanthrene golden orange G, single paste | lb. | 1.82 | - — |
| double paste | lb. | 3.51 | - — |
| 1099 Indanthrene dark blue BO, single paste | lb. | 1.41 | - 1.45 |
| 1101 Caledon jade green | lb. | 2.35 | - — |
| 1106 Indanthrene blue RS, single paste | lb. | 1.03 | - — |
| double paste | lb. | 2.13 | - — |
| 1113 Indanthrene blue GCD, double paste | lb. | 1.41 | - 1.45 |
| 1150 Indanthrene olive R, single paste | lb. | 1.08 | - — |
| 1151 Indanthrene brown R, single paste | lb. | 1.65 | - — |
| double paste | lb. | 3.19 | - — |
| 1212 Indanthrene red violet RH, single paste | lb. | 1.40 | - 1.43 |
| 1217 Helindon orange R, single paste | lb. | 1.57 | - 1.62 |
| p-4 Acid anthracine brown PG | lb. | 2.30 | - 2.38 |
| p-14 Anthracene chromate brown EB | lb. | .98 | - 1.00 |
| p-24 Benzo fast black L | lb. | 1.13 | - 1.64 |
| p-80 Diazo brilliant scarlet ROA | lb. | 2.54 | - — |
| p-202 Zambesi black V | lb. | 1.19 | - — |
| p-214 Celliton scarlet B | lb. | 1.07 | - — |
| p-313 Naphthol AS-SW | lb. | 2.42 | - 2.50 |
| Dyes, coaltar, for stains, oil-soluble, 100-lb. dms., sellers' works at warehouse. | | | |
| Black, blue, No. 550 | lb. | .61 | - — |
| Jet, No. 551 | lb. | .66 | - — |
| Brown, R, conc | lb. | 1.04 | - — |
| Orange R, brilliant | lb. | .67 | - — |
| Red, 4 B, conc | lb. | 1.03 | - — |
| Yellow, G | lb. | .88 | - — |
| FN conc | lb. | .91 | - — |
| Dyes, coaltar, for stains, spirit-soluble, same basis. | | | |
| Auramine, O | lb. | 1.54 | - — |
| Black, basic, blue | lb. | .91 | - — |
| Jet | lb. | .91 | - — |
| Blue, methylene, 2 B, conc | lb. | 1.21 | - — |
| Brown, Bismarck, R, conc | lb. | .61 | - — |
| Chrysodine, R, extra | lb. | .44½ | - — |
| Y, extra | lb | .48 | - — |
| Fuchsine, conc | lb. | 2.63 | - — |
| Green, Malachite, conc | lb. | 1.64 | - — |
| Rhodamine, B | lb. | 4.37 | - — |
| Safranine, Y, conc | lb. | 2.19 | - — |
| Violet, methyl, B | lb. | .87 | - — |
| Dyes, coaltar, for stains, water-soluble, same basis. | | | |
| Black, acid blue, B, extra | lb. | 61 | - — |
| Orange, acid, Y, conc | lb. | .36 | - — |
| Rhodamine, azo-, R, extra, conc. | lb. | 79 | - — |
| Scarlet, croceine, MOO | lb. | 1.12 | - — |
| Yellow, azo-, conc. | lb. | .81 | - — |
| Fast light, 3 G, extra | lb. | 1.69 | - — |
| Methanil, conc | lb. | .70 | - — |

Oil-soluble, spirit-soluble, water-soluble dyes in kegs, 3c. higher; tins, 10c. higher.

## E

| | | | |
|---|---|---|---|
| Echinacea root, bls | lb. | .45 | - .50 |
| Egg albumen (see Albumen). | | | |
| Yolk, dried, dom., bbls | lb. | .95 | - 1.00 |
| tanners, bbls. | lb. | .06 | - .07 |
| Elder flowers, bright, bls | lb. | .50 | - .55 |
| Elecampane root, bls | lb. | .30 | - .35 |
| Elm bark, grinding, bls | lb. | .35 | - .35 |
| powd., bbls., bxs | lb. | .48 | - .54 |
| select, bndls. | lb. | .70 | - .75 |
| Emetine hydrochloride, bots | oz. | 42.50 | -48.00 |
| Ephedra herb, bls. | lb. | .20 | - .21 |
| Ephedrine, synthetic, USP, anhydrous, bots., 100 ozs | oz. | .84 | - — |
| hydrous, bots., 100 ozs | oz. | .78 | - — |
| Hydrochloride, tin, 100 ozs | oz. | .60 | - — |
| Sulphate, cryst., tins, 100 ozs | oz. | .57 | - — |
| powd., tins, 100 ozs | oz. | .53 | - — |
| Epichlorohydrin, dms., c.l., works, | lb. | .36½ | - — |
| l.c.l., works | lb. | .37 | - — |
| tanks, works | lb. | .35 | - — |
| Epinephrine, synth., USP, bots. | gram | .60 | - .70 |
| Epsom salt, tech., bgs., c.l. | 100 lbs. | 2.30 | - — |
| l.c.l. | 100 lbs. | 3.05 | - — |
| USP, cryst., bgs., c.l. | 100 lbs. | 2.50 | - — |
| l.c.l., 5,000 lbs., 1 withdrawal, | 100 lbs. | 3.25 | - — |
| smaller lots | 100 lbs. | 3.50 | - — |

Epsom salt prices freight equalized: Balto., Carteret, N. J.; Chicago, Cincinnati, Cleveland, Midland, Mich.

| | | | |
|---|---|---|---|
| Ergot, USP, cns | lb. | 1.25 | - 1.30 |
| Eserine, bots. | oz. | 55.00 | -56.00 |
| Sulphate, bots | oz | 60.00 | -61.00 |
| Ether, acetic (see Ethyl acetate). | | | |
| Amyl, dms., c.l., works | lb. | .093 | - — |
| l.c.l., works | lb. | .102 | - — |
| tanks, works | lb. | .085 | - — |
| Butyl, dms., c.l., dlvd | lb. | .30½ | - — |
| l.c.l., dlvd | lb. | .31 | - — |
| tanks | lb. | .29 | - — |
| Butyric (see Ethyl butyrate). | | | |
| Dichloroethyl, purif., dms., works | lb. | .16½ | - — |
| l.c.l., same basis | lb. | .17 | - — |
| tanks, same basis | lb. | .15 | - — |
| Ethyl (see Ether, sulphuric). | | | |
| Isopropyl, dms., c.l., dlvd | lb. | .06 | - — |
| l.c.l., dlvd. | lb. | .06½ | - — |
| tanks, dlvd | lb. | .04½ | - — |
| Nitrous, conc., bots., 100 lbs | lb. | .93 | - 1.10 |
| Sulphuric, conc., dms | lb. | .18 | - .23 |
| USP, anesthesia, hospital, cns. | lb. | .75 | - 1.05 |
| synthetic, dms., c.l., frt. alld. | lb. | .13½ | - — |
| l.c.l., same basis | lb. | .14½ | - — |
| tanks, same basis | lb. | .12 | - — |
| Ethyl acetate, natural, fermentation, 85-88%, dms., c.l., frt. alld. | lb. | .17½ | - — |
| l.c.l., frt. alld. | lb. | .18½ | - — |
| tanks, frt. alld. | lb. | .16 | - — |
| 95-98%, dms., c.l., frt. alld. | lb. | .17½ | - — |
| l.c.l., frt. alld. | lb. | .18½ | - — |
| tanks, frt. alld. | lb. | .16½ | - — |
| 99%, dms., c.l., frt. alld. | lb. | .18 | - .18¼ |
| l.c.l., frt. alld. | lb. | .19 | - .19¼ |
| tanks, frt. alld. | lb. | .16¾ | - .16¾ |
| NF, dms. | lb. | .20 | - — |
| synthetic, 85-90%, dms., c.l., frt. alld. | lb. | .13½ | - — |
| l.c.l., frt. alld. | lb. | .14½ | - — |
| tanks, frt. alld. | lb. | .12 | - — |
| 95-98%, dms., c.l., frt. alld. | lb. | .13½ | - — |
| l.c.l., frt. alld. | lb. | .14½ | - — |
| tanks, frt. alld. | lb. | .12½ | - — |
| 99%, dms., c.l., frt. alld. | lb. | .14½ | - — |
| l.c.l., frt. alld. | lb. | .15½ | - — |
| tanks, dlvd. | lb. | .12½ | - — |
| Ethyl acetoacetate, dms., c.l., works | lb. | .41½ | - — |
| l.c.l., works | lb. | .42½ | - — |
| tanks, works | lb. | .40½ | - — |
| Benzoate, bots | lb. | .60½ | - .66 |
| Betaethoxypropionate, dms., works | lb. | .70 | - — |
| Bromide, tech., 98%, dms | lb. | .36 | - .40 |
| Butyrate, bots | gal. | 5.50 | - — |
| cns., works | lb. | .65 | - .70 |
| dms., works | lb. | .60 | - — |
| Carbamate, dms. dlvd. E | lb. | .58 | - — |
| Chloride, tech., tanks | lb. | .13½ | - — |
| USP, bbls., cyl. | lb. | .20 | - .22 |
| Cinnamate, cns | lb. | 2.80 | - 3.60 |
| Formate, dms. | lb. | .38 | - — |
| Iodide, bots | lb. | 4.08 | - 4.27 |
| Lactate, dms., works | lb. | .41 | - — |
| Methacrylate, M-2, dms., works | lb. | .60 | - — |
| cns., works | lb. | .63 | - .67 |
| P-2, cns., works | lb. | .65 | - — |
| Myristate, dms., works | lb. | No prices | |
| Oenanthate, dms. | lb. | 2.60 | - 3.25 |
| Oleate, dms., l.c.l., works | lb. | .75 | - — |
| Oxalate, dms., frt. alld. | lb. | .33 | - — |
| Silicate, dist. (see Tetraethyl orthosilicate) | | | |
| 40% available $SiO_2$, dms., works | lb. | .50 | - — |
| Ethylalphanaphthylamine, bbls | lb. | .80 | - — |
| Ethylaniline, dms | lb. | .60 | - — |
| Ethylcellulose fib. dms., 5,000 lbs., works | lb. | .52 | - — |
| smaller lots, works | lb. | .54 | - .62 |
| Ethyldiethanolamine, dms., l.c.l., works | lb. | .80 | - — |
| Ethylene dichloride, dms., c.l., works frt. alld. E. of Rockies | lb. | 09 | - — |
| West of Rockies | lb. | .09½ | - — |
| l.c.l., works, frt. alld. E. of Rockies | lb. | .11½ | - — |
| West of Rockies | lb. | .12 | - — |
| smaller containers | lb. | .12½ | - — |
| tanks, frt. alld. E. Rockies | lb. | .08 | - — |
| West of Rockies | lb. | .08½ | - — |
| Oxide, dms., c.l., works | lb. | .20 | - .21 |
| l.c.l., works | lb. | .21 | - .22 |
| tanks, works | lb. | .15 | - .16 |
| Trichloride (see Trichloroethane). | | | |
| Ethylenediamine, tanks, works | lb. | .50 | - — |
| Ethyleneglycol, dms., c.l., frt. alld. E. | lb. | .15 | - — |
| l.c.l., same basis | lb. | .16 | - — |
| tanks, same basis | lb. | 13½ | - — |
| Diethylether, dms., l.c.l., works | lb. | .50 | - — |
| Monobutylether, dms., c.l., works | lb. | .21½ | - — |
| l.c.l., works | lb. | .22 | - — |
| tanks, works | lb. | .20 | - — |
| Monoethylether, dms., c.l., works | lb. | .18 | - — |
| l.c.l., works | lb. | .18½ | - — |
| tanks, works | lb. | .16½ | - — |
| Monoethylether acetate, dms., c.l., works | lb. | .16½ | - — |
| l.c.l., works | lb. | .17 | - — |
| tanks, works | lb. | .15 | - — |
| Monomethylether, dms., c.l., works | lb. | .19½ | - — |
| l.c.l., works | lb. | .20 | - — |
| tanks, works | lb. | .18 | - — |
| Monomethylether acetate, dms., c.l., works | lb. | .24½ | - — |
| l.c.l., works | lb. | .27 | - — |
| tanks, works | lb. | .23 | - — |

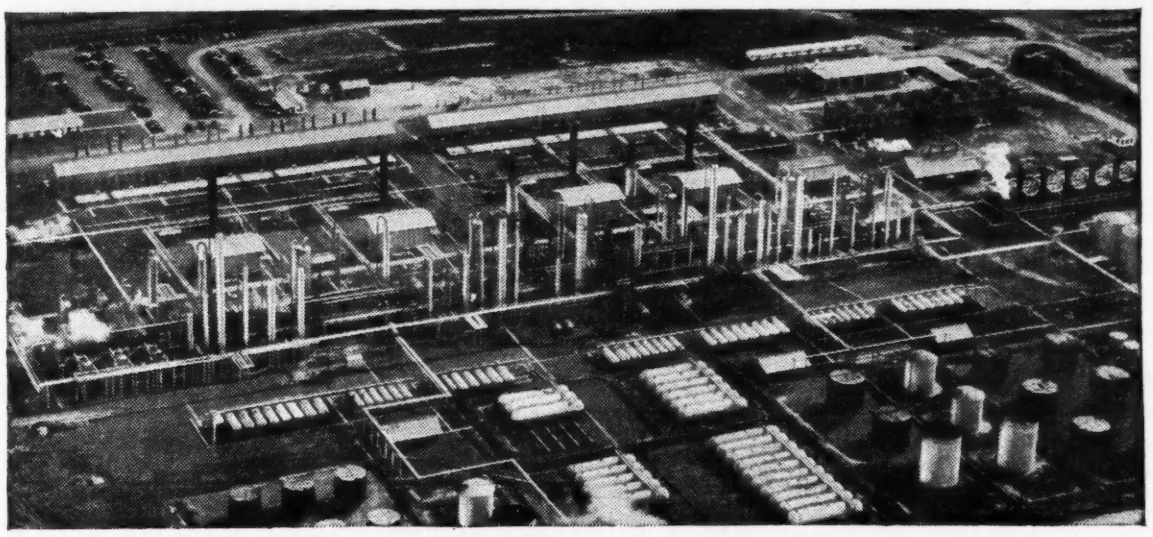
## Dyes, Coaltar, General Use—Fir Balsam

| | | | |
|---|---|---|---|
| Ethylethanolamines, mixed, dms., c.l., works | lb. | .32 | - — |
| l.c.l., works | lb. | .33 | - — |
| Ethylmonoethanolamine, l.c.l., dms., works | lb. | .86 | - — |
| Ethylmorphine, hydrochloride, bots. | oz. | 11.85 | - — |
| Ethylorthotoluidine, bbls. | lb. | .80 | - — |
| Ethylvanillin, cns., 5 lbs. or more | lb | 6.75 | - — |
| smaller lots | lb. | 6.80 | - 6.90 |
| Eucalyptol, USP, cns., dms. | lb. | 2.05 | - 4.00 |
| Eucalyptus leaves, bls. | lb. | .12 | - .13 |
| Eugenol, prime USP XII | lb. | 2.85 | - 3.25 |
| Euphorbia, pil., herb, bls. | lb. | .15 | - .16 |

## F

| | | | |
|---|---|---|---|
| Feldspar, enamel, 100 mesh bgs., works. | ton. | 17.00 | -20.50 |
| bulk, c.l., works | ton. | 14.00 | -17.50 |
| Glass, 20 mesh bgs., tons, works. | ton. | 12.75 | -16.25 |
| bulk, c.l | ton. | 9.75 | -12.25 |
| Pottery, bulk, c.l., works | ton. | 17.00 | -19.00 |
| bgs., l.c.l., 2 tons, works | ton. | 20.00 | -22.00 |
| Fennel seed, Argentine, bgs. | lb. | .08½ | - .09 |
| Indian, bgs. | lb. | .15 | - .15½ |
| Fenugreek, domestic, bgs. | lb. | .10 | - .10½ |
| Indian, bgs. | lb. | .11 | - .11½ |
| futures, bgs. | lb. | .10½ | - .11 |
| Ferric sulphate (see iron sulphate, ferric) | | | |
| Film scrap, colored, cs., works | lb. | .13½ | - — |
| water-white, cs., works | lb. | .14½ | - — |
| Fir balsam, Canada, cns. | gal. | 32.50 | -33.00 |
| Oregon, bbls. | gal. | 2.25 | - 2.30 |


# LOOK TO CELANESE



## FOR FORMALDEHYDE

### IN GREATER VOLUME

Formaldehyde is one of the most important products in the expanding family of organic chemicals produced at CHEMCEL, the Celanese plant near Bishop, Texas.

High quality Celanese Formaldehyde U.S.P. is sold commercially as Formalin—a water white solution containing 40% Formaldehyde by volume, 37% by weight. It is manufactured in both methanol inhibited and uninhibited grades.

A clear, colorless liquid, controlled to meet the most exacting requirements, Celanese Formaldehyde is widely used in resins, adhesives, plastics and in the production of various organic chemicals.

A new brochure is available containing specifications and general information on many of the Celanese organic chemicals. Write for your copy—and call on Celanese whenever you need technical assistance regarding organics.

CELANESE CORPORATION OF AMERICA,
Chemical Division, 180 Madison Ave.
New York 16, N. Y.

Celanese* Chemicals

*Reg. U. S. Pat. Off.

ALCOHOLS • ALDEHYDES • GLYCOLS • KETONES • ORGANIC ACIDS • SOLVENTS • PLASTICIZERS • INTERMEDIATES

## Fish Berries—Gum, Galbanum

Fishberries, bgs. ..... lb. .24 - .28
Fishliver oils (see Oil, fishliver).
Fishmeal, ground, 60% protein, bgs., Balto. area...ton.120.00 - —
65% protein, bgs., Balto. area...ton.125.00 - —
Fishscrap, dried, 60% protein, bulk, Balto. area...ton.100.00 - —
Flaxseed, black, bgs ..... lb. .35 - .36
blonde, bgs. ..... lb. .23 - .25
Husks, bgs. ..... lb. .68 - .70
Fluorspar, acid grade, bgs., c.l., mines. ton.45.50 - —
l.c.l., mines ..... ton.47.50 - —
bulk, contract, c.l., mines.....ton.40.00 - —
noncontract c.l., mines.....ton.43.00 - —
l.c.l., mines ..... ton.45.00 - —
ceramic grade, No. 1, ground, 90-92% $CaF_2$ bulk, c.l., mines. net ton.38.50 - —
washed gravel, 70% or more, $CaF_2$ bulk, c.l., mines...ton.34.00 - —
65%, bulk, c.l., mines.....ton.33.00 - —
60%, bulk, c.l., mines.....ton.32.00 - —
less than 60%, bulk, c.l., mines... ton 30.00 - —
Formaldehyde, inhibited, bbls., c.l., works..lb. .0695- —
l.c.l., works..... lb. .0745- —
drms., extra, c.l., works.....lb. .0595- —
l.c.l., works..... lb. .0645- —
tanks, works..... lb. .0420- —
tankmxs, dlvd., N.Y.C.....lb. .0445- —
uninhibited, tanks, works.....lb. .0400- —
Fringetree bark, bls.....lb. .55 - .60
Fuller's earth, dom., powd., bgs., c.l., Fla., Ga. mines...ton.30.00 - —
Tex. mines ..... ton.27.00 - —
spent, bulk, Bayonne.....ton. 2.00 - 4.00
imp., bgs., c.l.....ton.30.00 -40.00

Furfural, tech., drms., c.l., works.lb. .13 - —
drms., cns., l.c.l., works.....lb. .15½- .20½
tanks, works ..... lb. .09½- —
Fusel oil, refined, drms., c.l.....lb. .29½- —
l.c.l. ..... lb. .30½- —
tanks ..... lb. .28 - —
Fustic extract, cryst., No. 1, bbls., l.c.l. lb. .42½- —
No. 1A, bbls., l.c.l.....lb. .41½- —
No. 2, bbls., l.c.l.....lb. .40½- —
No. 3, bbls., l.c.l.....lb. .38½- —
liquid, No. 0, bbls., l.c.l.....lb. .22 - —
No. 1, bbls., l.c.l.....lb. .20½- —
No. 2, bbls., l.c.l.....lb. .19½- —
No. 3, bbls., l.c.l..... lb. .17 - —
solid, No. 1, bxs., l.c.l.....lb. .28 - —

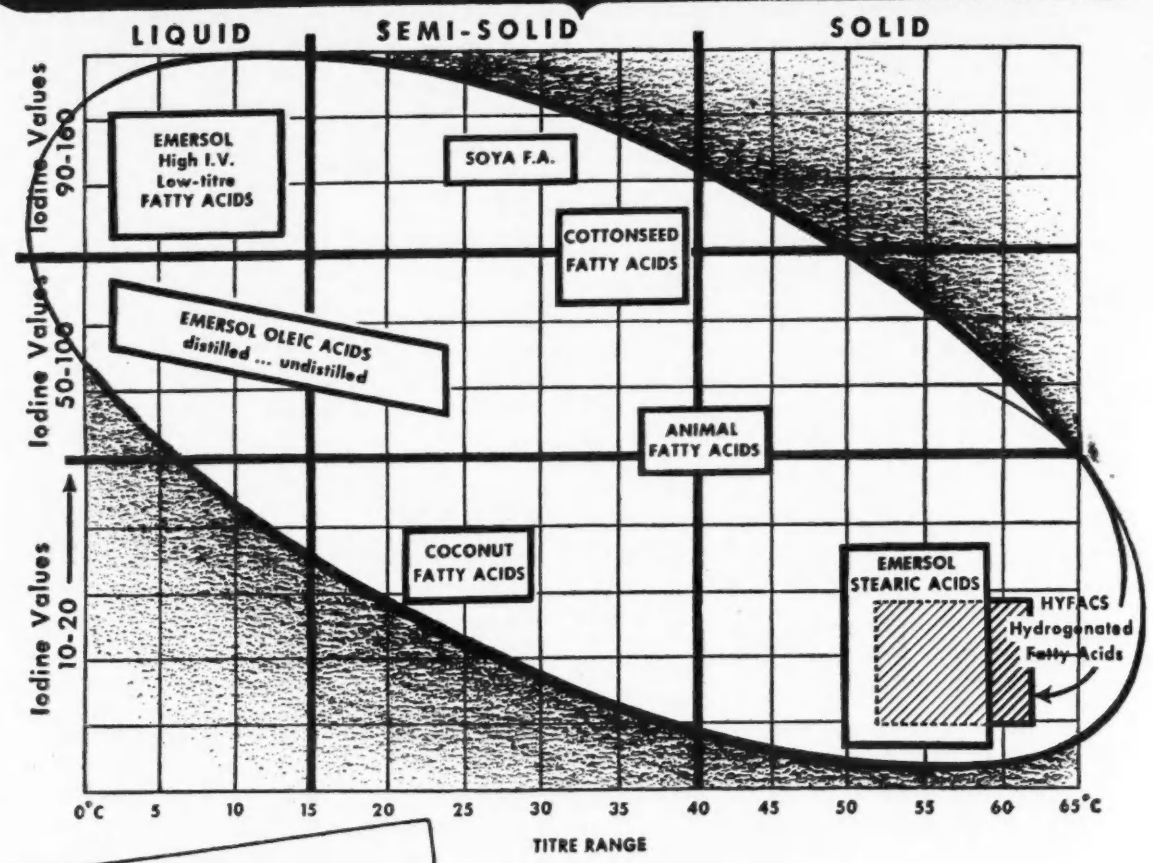
## G

G salt, bbls.....lb. nq - -
Galangal root, bls.....lb. .14 - .15
Gambier, plantation, bgs., ex dock..lb. .21 - .23
Extract, bbls.....lb. No stocks
Gammapicoline, 95% drms., c.l., works. lb 1.35 - —
Gasoline, at refinery, ex tax, Arkansas, 73-75 octane, tanks.. gal. .1075- —
Bayonne, 74 octane, tanks....gal. .118 - —
Gulf coast, 73-75 octane, tanks, gal. .105 - .11
Group 2, 73-75 octane, tanks..gal. .105 - .12875
Pennsylvania, western, U. S. motor, 74 octane, leaded tanks, gal. .1175- .12
natural, 26-70, octane group 3, tanks..gal. 085 - —

Gelatin, silver label, etns., dlvd....lb. 1.25 - —
export, cs.....lb. 1.35 - —
Gelatin price 5c. higher for deliveries in Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Ore., Tex., Utah, Wash., Wyo.
Gelsemium root, bls.....lb. .35 - .40
Gentian root, bls.....lb. .16 - .17
grd., bbls., bxs.....lb. .19 - .20
powd., bbls., bxs.....lb. .21 - .22
Geraniol, 92-96%, cns. dms.....lb 3.40 - —
prime .....lb. 2.75 - —
Geranyl acetate, cns.....lb. 3.35 - 3.90
Ginger, oleoresin, bots.....lb. 4.25 - 4.75
Root, African, bls.....lb. .14¾- .15¼
Cochin, bleached, bgs.....lb. No stocks
unbleached, bgs., futures.....lb. .20 - .20½
Jamaica, No. 1 bgs.....lb. No stocks
No. 2, bgs.....lb. .21½- .22
No. 3, futures.....lb. .18½ Nom.
Rhattoon, bgs. .....lb. .17 Nom.
Glauber's salt, anhyd. (see Soda sulphate).
cryst., bgs., works.....100 lbs. 1.25 - 1.75
l.c.l., bgs., works.....100 lbs. 1.75 - 2.10
Glue, bone, calcium type, 24 millipoise, 26 jellygrams, bgs., c.l., East of Midwest...lb. .21 - .24
30/50, bgs., c.l., same basis....lb. .22 - .26
85/92, bgs., c.l., same basis....lb. .23 - .26
$2/108, bgs., c.l., same basis...lb. .25 - .27
Bone glue, l.c.l. prices, 1c. higher than c.l.
ground, 40-45 jelly in grams, bgs., c.l. (50,000 lbs.), dlvd..lb. .26 - —
l.c.l., same basis.....lb. .27 - —
pulverized, 60 jelly in grams, bgs., c.l. (50,000 lbs.), same basis...lb. .27½- —
l.c.l., same basis.....lb. .28½- —

Glue, hide, 100-121 (jelly in grams), bgs., c.l., dlvd..lb. .23 - .27
122-149, bgs., c.l., dlvd.....lb. .25 - .29
150-177, bgs., c.l., dlvd.....lb. .25 - .29
178-206, bgs., c.l., dlvd.....lb. .26 - .30
207-236, bgs., c.l., dlvd.....lb. .27 - .31
237-266, bgs., c.l., dlvd.....lb. .28 - .32
267-298, bgs., c.l., dlvd.....lb. .29 - .33
299-330, bgs., c.l., dlvd.....lb. .30 - .34
331-362, bgs., c.l., dlvd.....lb. .31 - .35
363-394, bgs., c.l., dlvd.....lb. .32 - .36
395-427, bgs., c.l., dlvd.....lb. .33 - .37
428-460, bgs., c.l., dlvd.....lb. .34 - .38
461-494, bgs., c.l., dlvd.....lb. .35 - .39
495-529, bgs., c.l., dlvd.....lb. .36 - .40
Hide glue l.c.l. prices 1c. higher than c.l.; bbls., 1c. more than bgs.
Glycerin, crude, saponification, 88% to refiners, tanks, dlvd..lb. .28 - .30
soaplye, 80%, tanks, dlvd.....lb. .27 - .31
dynamite, drms., c.l., dlvd.....lb. .39½- .40¼
l.c.l., dlvd. .....lb. .40 - .40¾
tanks, dlvd. .....lb. .39¼- .40
high gravity, drms., c.l.....lb. .39½- .40¼
l.c.l. .....lb. .40 - .40¾
tanks .....lb. .39¼- .40
refined, EP, 98%, drms., c.l.....lb. .39¾- .41¼
tanks .....lb. .39½- .41¼
USP, 95%, drms., c.l.....lb. .39½- .41¼
l.c.l. .....lb. .40 - .41¾
tanks .....lb. .39¼- .40
yellow, distilled, drms., c.l.....lb. .39¾- .40¼
l.c.l .....lb. .39¾- .40⅝
Glycine USP (see Acid, aminoacetic)
Glycol boriborate, drms.....lb. .22 - —
Stearate, drms. .....lb. .26 - —
Gold chloride, acid-brown, bots....oz.22.00 -22.25
acid-yellow, bots. .....oz.20.00 -20.25
Gold of pleasure seed, bgs.....lb. .40 - .41
Goldenseal root, bls.....lb. 5.50 - 5.75
powd., bxs.....lb. 5.75 - 6.00
Gold-sodium chloride, photo, bots..oz.13.50 -14.00
USP IX, bots.....oz.14.50 -15.00
Grains of paradise, bgs.....lb. .40 - .41
Graphite, imported, amorph., powd., bgs., dlvd..lb. .04 - .06
crystalline, 88-90%, powd., bgs., ex whse. lb. .14 - .16
96-92%, powd., bgs., ex whse. lb. .16 - .19
97%, powd., bgs., ex whse....lb. .22 - .25
flake, No. 1 90-95%, bgs., etns., ex whse..lb. .21 - .22
No. 2, bgs., ex whse .....lb. .23 - —
Grease, house, loose.....lb. .14½- —
White, choice, loose.....lb. .16½- —
Wool (see Degras and Lanolin).
Yellow, loose .....lb. .15 - —
Green, brilliant, thionavin, toner, molybdic, bgs., works..lb. 4.25 - 4.50
Tungstic, bgs., works.....lb. 4.25 - 4.50
Chrome, CP, dark, light, medium, blue content up to 5%, bbls., dlvd. N. of Tenn. and N. C. E. of Miss., including St. Paul, Minneapolis, Davenport, Rock Island, St. Louis..lb. 34½- —
6-10%, bbls., same basis..lb. 35½- —
11-15%, bbls., same basis..lb. 36½- —
16-20%, bbls., same basis..lb. 37 - —
21-25%, bbls., same basis...lb. 38 - —
26-30%, bbls., same basis..lb. 38¼- —
31-35%, bbls., same basis..lb. 38 - —
36-40%, bbls., same basis..lb. 41 - —
41-45%, bbls., same basis..lb. 42½- —
46-50%, bbls., same basis..lb. 44¼- —
50% and over, bbls., same basis..lb. 45¼- —
reduced color, 5%, bbls., same basis. lb. 10 - —
6-10%, bbls., same basis. lb. 10¾- —
11-13%, bbls., same basis. lb. 11¼- —
14-16%, bbls., same basis..lb. 12 - —
17-19%, bbls., same basis..lb. 12¾- —
20-21%, bbls., same basis..lb. 12½- —
22-23%, bbls., same basis..lb. 12¾- —
24-25%, bbls., same basis..lb. 13 - —
26-27%, bbls., same basis..lb. 13½- —
28-29%, bbls., same basis. lb. 14 - —
30-31%, bbls., same basis..lb. 15 - —
32-33%, bbls., same basis..lb. 16¼- —
34-35%, bbls., same basis..lb. 17¼- —
36-40%, bbls., same basis..lb. 20 - —
41-45%, bbls., same basis..lb. 22¼- —
46-50%, bbls., same basis..lb. 23¾- —
51-55%, bbls., same basis..lb. 23½- —
56-60%, bbls., same basis..lb. 24 - —
61-65%, bbls., same basis. lb. 25 - —
66-70%, bbls., same basis..lb. 26¼- —
Chrome green prices are ½c. higher dlvd Ala., Fla., Ga., La. (Shreveport, 1½c.), Miss., N. C., S. C., Tenn., Texas (Dallas, Ft. Worth, 1½c.; El Paso, 2c.), Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph; 1c. higher dlvd. Pac. coast; for Denver, Pueblo, Salt Lake City, Wichita, prices are equalized with Chicago.
Green, chromium oxide, hydrated, bbls., works..lb. .75 - 1.00
pure, bgs., works.....lb. .31½- .38
Malachite, thioflavin toner, molybdic, bbls., works..lb. 3.00 - —
Tungstic, bbls., works .....lb 3.40 - —
Paris (see P).
Phthalocyanin toner, bbls., works.lb. 4.40 - 5.00
Tungstated, brilliant, bgs.....lb. 3.00 - 4.00
Emerald, bgs. .....lb. 2.00 - —
Verdigris (see V).
Dyes (see Dyes, confiar).
Grindelia robusta herb, bls.....lb. .30 - .35
Guaiac resin, cs.....lb. .48 - .49
Wood, bls .....lb. .35 - .36
Guaiacol, cryst., NF, tins.....lb. No Prices
liquid, NF, bots., cbys.....lb. 1.80 - 1.85
Carbonate, NF, drms.....lb. 2.85 - —
Guarana, powd., cs. .....lb. 2.00 - 2.10
Gum, accroides (see Gum, yacca).
Aloe (see A.)
Ammoniac, tears, cs.....lb. .90 - .93
Arabic, amber, sorts, bgs.....lb. .14 - .14½
white, sorts, 1, bgs.....lb. .28 - .29
powdered, USP, bbls. .....lb. .20½- .21
Asafetida (see A).
Asphaltum (see A).
Benzoin, Sumatra, cs.....lb. .40 - .45
Camphor (see C).
Copal, Congo, No. 1, bgs.....lb. .26 - .28
No. 2, bgs.....lb. .21 - .23
No. 3, bgs.....lb. .17 - .18
Macassar DBB, bgs.....lb. .23½- .23½
AFA, bgs.....lb. .23½- .24½
loba C, bgs.....lb. .27½- .28½
Philippine, 1st quality, bgs.....lb. .26 - .28
2nd quality, bgs.....lb. .21 - .23
3rd quality, bgs.....lb. .18 - .21
Dammar, Batavia, AE, cs.....lb. .21½- .26½
E, cs. .....lb. .18 - .19
Singapore, No. 1.....lb. .29 - .30
No. 2, cs.....lb. .23 - .25
East India, black, bold, bgs.....lb. .14 - .15½
Batu, bold, bgs.....lb. .11 - .12½
nubs, bgs.....lb. .08½- .09½
Elemi, cns.....lb. .25 - .27
Ester, gum-rosin type, drms., c.l., dlvd. Ill., Ind., Ky., Mich., Mid-Atl. States, N. E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W. Va.....lb. .17 - .17¾
wood-rosin type, drms., c.l., dlvd., Ill., Ind., etc..lb. .17 - .17¾
Euphorbium, cs. .....lb. .50 - .55
Galbanum, cs. .....lb. .85 - .90


# CHECK THIS CHART — See How There Is An Emery Fatty Acid For Every Use



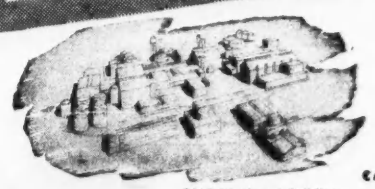

**FATTY ACID ESTERS**

In general, these esters though not soluble in water, exhibit surface-active properties which make them excellent dispersive blending or softening agents. Write for Bulletin 461 containing complete specifications.

Emery 2210 Glyceryl Monostearate
2230 Glyceryl Trioleate
2510 Propylene glycol monostearate
2410 Diethylene glycol monostearate
2221 Glyceryl Mono-oleate
2301 Methyl Oleate
2302 Propyl Oleate

Emery's Development Department is evaluating the polyglycol esters with various fatty acids. Working samples are available.

This chart indicates the scope of Emery's program to supply a suitable fatty acid wherever Fatty Acids will improve quality and efficiency, saving time and money. While it does not outline exact specifications, it does show the general relationship between relative iodine values and melting points. For complete technical information or use data, write to our SALES SERVICE DEPT.



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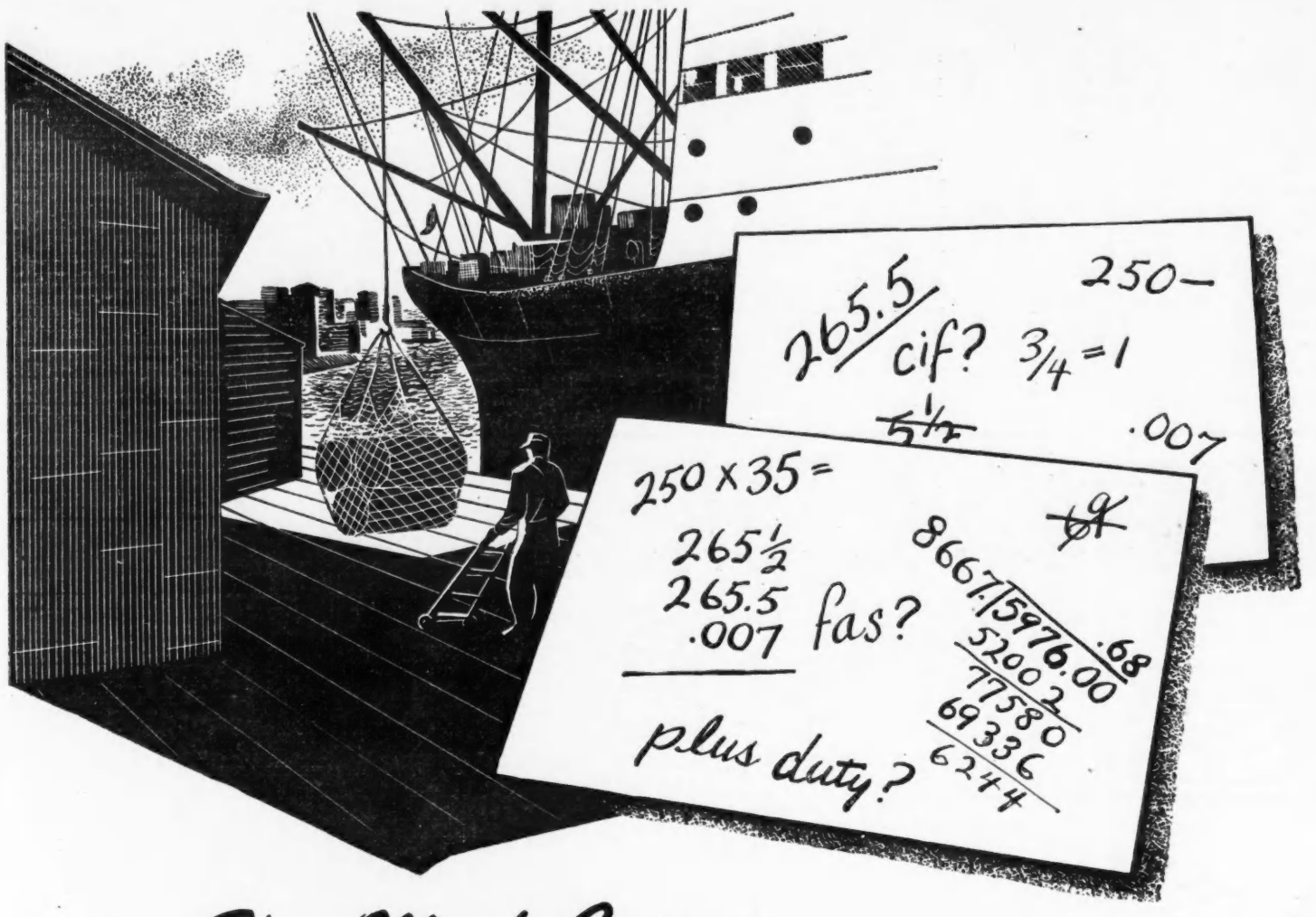


# How Much Copra

## FOR A DRUM OF BENZENE HEXACHLORIDE?

Your bookkeeper may know the worth of every chemical you make in terms of every commodity imported into the U. S. A. But who in your organization has the time and knowledge needed to turn commodities into cash?

American chemicals are needed despite reviving production abroad. But foreign purchasers must arrange first for dollar credits with which to buy them. So in many transactions ENCO is both an importer and exporter—with profit to the American producer and foreign buyer—and vice versa.

Because of world-wide associations for two generations, we can offer valuable assistance to American manufacturers seeking foreign outlets for their products. And our timely knowledge of regulations affecting goods and currencies can do much to speed their interchange.

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ALUMINA HYDRATE • ALUMINUM HYDROXIDE U.S.P. • ALUMINUM CHLORHYDROL
ALUMINUM CHLORIDE • ACETONE • ACETANILID • ACID SODIUM PYROPHOSPHATE
BARIUM HYDRATE • BARIUM SULFATE • BARIUM PEROXIDE • BENZOATE OF SODA
BICARBONATE OF SODA • BENZENE HEXACHLORIDE • BENZOYL PEROXIDE • BLANC FIXE
CARBON TETRACHLORIDE • CARBON BISULPHIDE • CAUSTIC POTASH • CAUSTIC SODA
CITRIC ACID • CALCIUM CITRATE • CREAM OF TARTAR • D D T • EPSOM SALT • LECITHIN
LITHIUM SALTS • PHOSPHORIC ACID • PHOSPHOROUS (RED AMORPHOUS)
ROCHELLE SALT • SAPONIN • SODIUM SULPHIDE • SODA ASH
TARTARIC ACID • TARTAR EMETIC • VANILLIN

## Gum Gamboge—Kava Kava Root

Gum, gamboge, pipe, cs.....lb. 1.70 - 2.00
powd., bbls.....lb. 1.95 - 2.25
Ghatti, No. 2, bgs.....lb. .35 - .37
No. 3, bgs.....lb. .31 - .33
Guaiac (see Gualac resin).
Karaya, No. 1.....lb. .46 - .51
No. 2.....lb. .38 - .43
No. 3.....lb. .33 - .36
No. 4.....lb. .28 - .31
No. 5.....lb. .23 - .27
No. 6.....lb. .20 - .22
Kauri, bgs.....lb. .31½ - .32¾
Locust bean, powd., bgs.....lb. .42 - .43
Mastic, cs.....lb. 2.25 - —
Myrrh, cs.....lb. .35 - .38
Olibanum, siftings, cs.....lb. .12 - .13
tears, cs.....lb. .22 - .38
Opium (see O).
Red (see Gum yacca).
Rosin (see R).
Sandarac, cks.....lb. 1.20 - 1.45
Scammony, cs.....lb. 1.50 - 1.55
Sterculia (see Gum, karaya).
Talha, bgs.....lb. .10 - .11
Tragacanth, No. 1, cs.....lb. 3.60 - 3.70
No. 2, cs.....lb. 3.20 - 3.25
No. 3, cs.....lb. 2.25 - 2.50
powdered, USP, bbls.....lb. 1.35 - 1.45
Yacca, bgs.....lb. .06 - .07
Gypsum, Keane's cement, paper bgs., c.l., Acme, Tex., frt. equald.. ton.22.65 - —
Harlem river, N. Y., frt. equald. ton.28.25 - —
Medicine Lodge, Kans., frt. equald..ton.17.00 - —
New Brighton, N. Y., frt. equald. ton.30.65 - —
Southard, Okla., frt. equald.ton.17.00 - —
Sweetwater, Tex., frt. equald. ton.21.45 - —
Gypsum, plaster of paris, paper bgs., c.l., Acme, Texas, frt. equald. ton.12.50 - —
Blue Rapids, Kans., frt. equald ton.10.50 - —
Harlem river, N. Y., frt. equald. ton.12.00 - —
Medicine Lodge, Kan., frt. equald...ton.12.50 - —
New Brighton, N. Y., frt. equald. ton.18.00 - —
Southard, Okla., frt. equald.ton.12.50 - —
Sweetwater, Tex., frt. equald... ton.12.50 - —
Stucco, paper bgs., c.l., Acme, Texas, frt. equald...ton. 8.00 - —
Akron, N. Y., frt. equald...ton. 8.00 - —
Blue Rapids, Kans., frt. equald. ton. 8.00 - —
Clarence Center, N. Y., frt. equald..ton. 8.00 - —
Fort Dodge, Iowa, frt. equald. ton. 8.00 - —
Grand Rapids, Mich., frt. equald..ton. 8.00 - —
Gypsum, Ohio, frt. equald..ton. 8.00 - —
Harlem river, N. Y., frt. equald. ton. 8.00 - —
National City, Mich., frt. equald..ton. 8.00 - —
New Brighton, N. Y., frt. equald. ton. 8.00 - —
Plasterco, Ga., frt. equald..ton. 8.00 - —
Portsmouth, N. H., frt. equald. ton. 8.00 - —
Roton, Texas, frt. equald..ton. 8.00 - —
Saltville, Va., frt. equald..ton. 9.00 - —
Southard, Okla., frt. equald..ton. 8.00 - —
Sweetwater, Texas, frt. equald. ton. 8.00 - —
Gypsum, terra alba, paper bgs., c.l., Harlem river, N. Y., works. ton.22.50 - —
New Brighton, N. Y., works... ton.21.00 - —

## H

Hawthorn berries, bgs.....lb. .55 - .57
Heliotropin, cryst., cns.....lb. 3.15 - 4.00
Hellebore, white, powd., bbls.....lb. .40 - .45
Helonias root, bls.....lb. 2.00 - 2.25
Hematine extract, cryst., No. 0, bbls., l.c.l..lb. .45½- —
No. 1, bbls., l.c.l.....lb. .44½- —
No. 1A, bbls., l.c.l.....lb. .41½- —
No. 2, bbls., l.c.l.....lb. .40½- —
No. 3, bbls., l.c.l.....lb. .38½- —
No. 4, bbls., l.c.l.....lb. .36½- —
No. 5, bbls., l.c.l.....lb. .34½- —
paste, No 1, bbls., l.c.l.....lb. .19 - —
No. 2, bbls., l.c.l.....lb. .18 - —
No. 3, bbls., l.c.l.....lb. .17 - —
No. 4, (red), bbls., l.c.l.....lb. .12½- —
Hemlock bark extract, 25% tannin, bbls., c.l., works..lb. No stocks
tanks, works.....lb. No stocks
Henbane leaves, bls.....lb. .80 - 1.00
Henna leaves, bls.....lb. .24 - .25
powd., bbls., bgs.....lb. .30 - .35
Heptane, industrial, tanks, group 3, gal. .12½- .13½
Hexalin (see Cyclohexanol).
Hexaethyl tetraphosphate, cns., works. lb. 1.25 - —
dms., c.l., works.....lb. .80 - —
l.c.l., works.....lb. .90 - 1.00
Hexamethylene-tetramine, tech., bbls., 1,000-lb. lots, Perth Amboy or N.Y.C..lb. .26 - —
smaller lots, same basis.....lb. .27 - —
USP, dms., 500 lbs. or more, same basis..lb. .37 - —
smaller lots, same basis.....lb. .38 - —
Hexane, industrial, tanks, group 3, gal. 13½- .14¼
Hexanol, normal, dms., c.l., works..lb. .27½- —
l.c.l., works.....lb. .28 - —
tanks, works.....lb. .26 - —
Homatropine, hydrobromide, bots...oz. 15.00 -25.00
Hydrochloride, bots.....oz. 29.00 -22.00
Hoofmeal, 17-18% ammonia bulk, c.l., Chicago, unit-ton. 6.50 - 7.00
Hops, NF, bls.....lb. .55 - 1.30
Horehound, bls.....lb. .12 - .13
Hydrangea root, bls.....lb .14 - .17
Hydrastine, bots.....oz. 53.50 -53.80
Sulphate, bots.....oz. 53.50 -53.80
Hydrastinine, 10-grain bots.....bot. 1.95 - —
Hydrastis (see Goldenseal).
Hydrofuramide dms., fib. cns., works. lb. .30 - .40
Hydrogen peroxide, USP, bbls.....lb. 93%- .95
27½%, chys., E. of Miss. or W. coast via Panama Canal..lb. 16½- .18½
35%, chys, same basis, dms.....lb. 22½- —
dms., c.l., same basis.....lb. .19½- —
l.c.l., same basis.....lb. .20½- —
tanks.....lb. .18½- —
Hydroquinone, bbls., dms.....lb. .90 - .94
Hydroxycitronellal, cns.....lb. 6.50 - 7.50
Hyoscine hydrobromide, bots.....oz. 34.00 -38.00
Hyoscyamine, bots.....oz. 18.00 -20.00
Hydrobromide, bots.....oz. 18.00 -19.50
Sulphate, bots.....oz. 14.00 -19.50
Hypernic extract, cryst., No 1, bbls., l.c.l..lb. 52½- —
No 2, bbls., l.c.l.....lb. 44½- —
liquid, No. 1, bbls., l.c.l.....lb. 28½- —
No. 2, bbls., l.c.l.....lb. 23½- —
solid, No. 1, bxs., l.c.l.....lb. 41 - —
Hyssop herb, ogs.....lb. .50 - .55
Leaves, bgs.....lb. .55 - .60

## I

Iceland moss, bgs.....lb. .30 - .32
Ichthammol, NF, bots.....lb. 2.45 - —
Indian red (see Red, Indian)
Indigo, nat., chests.....lb. 2.11 - 2.80
synth., paste, bots.....lb. .16½- .19
powd., bbls.....lb. .74½- .85
Indol, CP, bots.....lb. 18.00 -25.00
Inositol, tins, dlvd.....lb. 5.00 - —
Insect flowers (see Pyrethrum)
Iodine, crude, kgs., ex whse., Staten Island..lb. 1.729 - —
resubl., bots., jars.....lb. 2.35 - 2.45
Iodoform, dms., kgs.....lb. 4.30 - 4.74
Ionone ketone, alpha, cns.....lb. 12.50 -16.10
beta, cns.....lb. 9.00 -12.50
pure, cns.....lb. 5.65 - 7.95
Methyl (see M)
IPC, bots., 1-5 lbs.....lb. 2.48 - 2.72
bo. dms., 100 lbs., ship't point..lb. 2.30 - 2.50
50 lbs., ship't point.....lb. 2.40 - 2.52
10-25 lbs., ship't point.....lb. 2.50 - 2.54
Ipecac root, bgs.....lb. 4.60 - 4.70
powd., bgs.....lb. 4.85 - 4.95
Irish moss, bleached, pulse, bls. - lb. .19 - .21
Iron acetate, liquor, 25° bbls., c.l., works.....lb. .09 - —
l.c.l., works.....lb. 09½- —
solut., USP 1X, cbys.....lb. .16 - —
dms.....lb .17 - —
Chloride (ferric), anhydr., tech., dms., c.l., works. 100 lbs. 5.25 - —
l.c.l. works.....100 lbs. 6.00 - 7.00
cryst., tech., bbls., works. 100 lbs. 5.00 - 6.00
l.c.l. bbls. works.....100 lbs. 5.50 - 8.00
USP X, lump, bbls.....lb. 07½- 08
solut., 42 Be, cbys., works, frt. alld. or equald..lb. .06 - 06½
Iron citrate, gran., dms.....lb. .77 - .79
Glycerophosphate, N F., powd..lb. 4.35 - —
Hypophosphite, bbls., dms.....lb. 1.50 - 1.52
Iodide, bots.....lb. 3.48 - 3.63
Naphthenate, 6% Fe, dms., dlvd..lb. .21 - —
Nitrate, red, tech., dms.....lb. 03½- 04
Oxalate, gran., dms.....lb. .83 - .85
Phosphate, soluble, NF, gran., cs.lb. .64 - .65
Pyrophosphate, soluble, NF VII, gran., dms...lb. .69 - .72
Resinate, 7.4% Fe, dms.....lb. .22 - —
Stearate, dms., c.l.....lb. .43 - —
ton lots.....lb. .44 - —
less ton lots.....lb. .45 - —
Sulphate (ferric), anhyd., bgs., c.l., works..ton.52.50 - —
l.c.l., works.....ton.57.50 - —
partially hydrated, bgs., c.l. works..ton.28.50 - —
(ferrous), tech (see Copperas).
USP, cryst., bbls., dms.....lb. .09½- .10
Iron by hydrogen, kgs.....lb. .86 - .85
Iron-ammonium citrate, brown, green, gran., dms lb. .43 - .46
Oxalate, bbls.....lb. 23½- —
dms, bgs.....lb. .25½- 26½
Iron-sodium oxalate, fine gran., bbls., dms..lb 23½- 26½
Isobornyl acetate, cns.....lb. .97 - 1.10
Thiocyanoacetate, dms., c.l., works, gal. 3.85 - —
l.c.l., works.....gal. 3.85 - 4.05
tanks, works.....gal. 4.23 - —
Isobutyl acetate, cns.....lb. .97 - 1.25
Methacrylate, M-5, dms., works..lb. .60 - —
cns., works.....lb. .63 - .67
P-5, cns., works.....lb. .60 - —
Propionate, cns.....lb. No prices.
Isobutylaldehyde, dms., works.....lb. .33 - .36
Isoeugenol, extra, cns.....lb 3.20 - 4.00
cbys., extra.....lb. 3.10 - —
Isopentane, dms., works.....lb. .45 - .55
Isophorone, dms., c.l., works.....lb. .23½- —
l.c.l., works.....lb. .24 - —
tanks, works.....lb. .22 - —
Isopropanol (see Alcohol, isopropyl)
Isopropyl acetate, dms., c.l., frt. alld., E. of Rockies lb. .13½- —
l.c.l., same basis.....lb. .14 - —
tanks, same basis.....lb. .12 - —
Alcohol (see Alcohol, isopropyl).
Ether (see Ether, isopropyl).
Phenylcarbamate (see IPC).
Isopropylamine, dms., works.....lb. .25 - —

## J

Jaborandi leaves, bls.....lb. .15 - .20
Jalap root, NF, bls.....lb. .47 - .50
powd., bbls., bxs.....lb. .50 - .60
Resin, powd., bxs.....lb. 7.15 - 7.25
Juniper berries, bgs.....lb. .10 - .16
Tar, USP, dms.....lb. .50 - .52

## K

Kamala, powd., cns.....lb. .38 - .40
Kaolin (see China clay).
Kava kava root, bls.....lb. .27 - .28


"Spit tobacco juice, or die"

DNOC (dinitro-orthocresol)
may banish grasshopper plague

To millions of kids a grasshopper may be just a quaint "bug" which "spits tobacco juice" or makes passable bait for fish hooks. But to others all over the world, grasshoppers are destroying-pests which annually devour millions of dollars worth of food crops.

Grasshopper *control* is a vital issue to farmers everywhere!

Now, the new *Pittsburgh* chemical DNOC (Dinitro-Orthocresol) promises to become the most effective insecticide for grasshopper control yet developed. It is sure death to grasshoppers, non-injurious to humans, animals or crops, has excellent mixing qualities with inerts and the general stability desired for agricultural uses.

DNOC is one of a variety of agricultural chemicals, including insecticides, fungicides, germicides and rodenticides, produced by Pittsburgh Coke & Chemical Company for its affiliate Pittsburgh Agricultural Chemical Company, Empire State Building, 350 Fifth Ave., New York 1, N.Y. Address inquiries about *agricultural chemicals* to the above.

PITTSBURGH COKE & CHEMICAL COMPANY
Grant Building • Pittsburgh 19, Pa.

Other "Pittsburgh" Chemicals

Activated Carbon
Alkyl Methyl Pyridinium Chloride
Alpha Naphthylthiourea
Alphanitronaphthalene
Benzol—Motor, Nitration, Pure
Creosote
Cresol—Meta Para, Ortho
2,4—Dichlorophenoxyacetic Acid
Dinitro—Orthocresol
Isopropyl N—Phenyl Carbamate
Naphtha, Heavy Solvent
Naphthalene
Para Amino Phenyl Mercuric Acetate
Phenol
Phthalic Anhydride
Picoline—Alpha, Beta and Gamma
Pipe Line Enamel
Pyridine—Medicinal and Industrial
Sodium Cyanide
Sodium Thiocyanate
Sulphate of Ammonia
Sulphuric Acid—60°, 66° and Oleum
Tar Acid Oil Disinfectants
Tar—Crude and Road
Toluol—Nitration and Commercial
Xylol—10°, 5° and 3°

COAL CHEMICALS, ACTIVATED CARBON, NEVILLE COKE, EMERALD COAL, PIG IRON, GREEN BAG CEMENT, CONCRETE PIPE AND CONCRETE PRODUCTS, LIMESTONE PRODUCTS

Kerosene, at refinery: Ark., 42-44 w.w., tanks..gal. .09@25 - —
Bayonne, 41-43, w.w., tanks....gal. .103 - —
California, 40-43 w.w., tanks..gal. .1115- .1340
Gulf ports, 41-43, w.w., tanks..gal. .0925- .095
Okla.-Tex., 41-43, w.w., tanks..gal. .095 - .09625
Penn., 45 w.w., tanks.....gal. .1125- .13
47 w.w., tanks.....gal. .125 - .13
Kola nuts, bgs.....lb. 07 - .08
Kyanite, imp., low iron content, 10-mesh, whse..ton 85.00 -95.00
calcined, grain, 10-mesh, whse..ton 95.00 -105.00

## L

Ladyslipper root, bls.....lb. 1.80 - 2.00
Lanolin, anhyd., cosmetic, dms., works. lb. .22 - .24
pharmaceutical, USP, dms., works. lb. .20 - .22
hydrous .....lb. .18 - .20
Lard, cash, trcs., Chicago.....lb. .23½ - .24
Larkspur seed, bgs.....lb. .40 - .45
Laurel berries, bls.....lb. .25 - .26
Leaves, Portuguese, bls.....lb. .07½ - .07¾
Greek, bls., futures.....lb. .08¼ - .08⅝
Turkish, bls.....lb. .13½ - .14
Lavender flowers, medium, bls.....lb. .66 -
ordinary, bls.....lb. .25 - .26
select, bls.....lb. .75 - -
Lead acetate, white, crystals, bbls..lb. .20 - —
gran., bbls.....lb. .20½ - —
powd., bbls.....lb. .20¾ - —
Arsenate, dealers, basic powder, 6-lb. bgs. or larger, c.l..lb. .23½ - —
l.c.l. .....lb. .24½ - .25½
1-lb. bgs., c.l.....lb. .31 - —
l.c.l. .....lb. .32 - .33

Lead arsenate prices are works or whse. basis frt. alld. on 96 lbs. or more to dest. East.

Blue, basic sulphate, bbls., c.l., ship't point, frt. alld..lb. .18¼ - —
l.c.l., works .....lb. .19¼ - —
Carbonate (see Lead, white).
Chloride, fib. dms.....lb. .49 - —
Iodide, NF V, jars.....lb. 2.94 - 3.13
Linoleate, solid, 13%, bbls.....lb. .38¼ - —
Metal, pigs, prime, N. Y.....lb. .17½ - —
E. St. Louis.....lb. .1750- —
Metallic paste, dms., 10,000-40,000 lbs., works..lb. .27½ - —
2,000-10,000 lbs., same basis....lb. .28½ - —
up to 2,000 lbs., same basis..lb. .30 - —
Naphthenate, liquid, 10% Pb, dms., dlvd..lb. .16½ - —
24% Pb, dms., dlvd.....lb. .22¾ - —
Nitrate, bbls., c.l.....100 lbs.20.10 - —
l.c.l .....100 lbs.20.35 - —
Oleate, bbls.....lb. .36½ - —
Peroxide, powd., tech., bbls.....lb. .29 - .31
Red, 95% $Pb_3O_4$ or less, bbls., c.l., ship't point, frt. alld..lb. .20½ - —
l.c.l., same basis.....lb. .21½ - —
97% $Pb_3O_4$ bbls., c.l., same basis. lb. .20½ - —
l.c.l., same basis.....lb. .21½ - —
98% $Pb_3O_4$ bbls., c.l., same basis. lb. .20¾ - —
l.c.l., same basis.....lb. .21¾ - —
Resinate, precip., 26.8% Pb, dms..lb. .25 - —
Silicate, bgs.....lb. .17 - .17½
Stearate, bbls., c.l.....lb. .49 - .52
ton lots.....lb. .50 - .53
less ton lots.....lb. .54 - .57

Sulphate (see Lead, blue; Lead, white, basic sulphate).

Tallate, liquid, 16% Pb, dms....lb. .15 - —
solid, 30% Pb, dms.....lb. .23½ - —
White, basic carbonate, bgs., c.l., ship't point, frt. alld..lb. .19 - —
l.c.l., same basis.....lb. .20 - —
basic silicate, bgs., c.l., ship't point, frt. alld..lb. .17½ - .21¾
l.c.l., same basis.....lb. .17¾ - .22¾
basic sulphate, bgs., c.l., ship't point, frt. alld..lb. .15½ - —
l.c.l., same basis.....lb. .16¾ - —
Lecithin, edible, tech., bleached, dms., non-ret., c.l., works..lb. .22 - —
l.c.l., same basis.....lb. .24 - .29
unbleached, c.l., same basis..lb. .20 - —
l.c.l., same basis.....lb. .22 - .27
Lemon peel, bls.....lb. .25 - .30
Licorice extract, mass, cns.....lb. .25 - .30
powd., bbls. .....lb. .40 - .42
Root, bls. .....lb. .07 - .08
5-lb. bundles, cs.....lb. .45 - .50
powd., bbls.....lb. .10½ - .11
Lignin extract, tanning grade, bgs., c.l., works..lb. .04¾ - —
Lime, agricultural, bulk, works..tons. 9.00 - 9.50
Chemical (quicklime), lump, pebble, bulk, Adams, Mass.....ton. 9.00 - —
Annville, Pa.....ton. 9.00 - —
Bellefonte, Pa. .....ton. 9.00 - —
Berkeley, W. Va.....ton. 9.00 - —
Buffalo, N. Y.....ton. 9.00 - —
Carey, Ohio .....ton. 7.00 - —
Cedar Hallow, Pa.....ton. 9.50 - —
Cedar Hallow, Pa.....ton. 9.50 - —
Crab Orchard, Tenn.....ton. 8.50 - —
Eagle Mountain, Va.....ton. 8.50 - —
Farnams, Mass. .....ton. 9.00 - —
Gibsonburg, Ohio.....ton. 9.00 - —
Hannibal, Mo.....ton. 8.50 - —
Keystone, Ala. .....ton. 8.50 - —
Knoxville, Tenn.....ton. 8.50 - —
Limedale, Ark.....ton. 8.50 - —
Longview, Ala.....ton. 9.00 - —
Manistique, Mich.....ton. 8.00 - —
Marblehead, Ohio.....ton. 8.50 - —
Martinsburg, W. Va.....ton. 8.50 - —
Menominee, Mich.....ton. 9.00 - —
Mitchell, Ind.....ton. 8.00 - —
Newala, Ala.....ton. 7.50 - —
Ripplemead, Va.....ton. 8.50 - —
Riverton, Va.....ton. 8.50 - —
Rockland, Maine.....ton. 9.00 - —
Scioto, Ohio.....ton. 6.50 - —
Sherwood, Tenn.....ton. 9.30 - —
Sherwood, Wis.....ton. 8.50 - —
Springfield, Mo.....ton. 8.00 - —
Woodville, Ohio.....ton. 9.50 - —
York, Pa.....ton. 9.00 - —
Hydrated, paper bgs., Adams, Mass. ton.11.50 - —
Annville, Pa.....ton.11.50 - —
Bellefonte, Pa. .....ton.11.50 - —
Berkeley, W. Va.....ton.10.00 - —
Buffalo, N. Y.....ton.11.50 - —
Carey, Ohio.....ton. 9.00 - —
Cedar Hollow, Pa.....ton.11.50 - —
Crab Orchard, Tenn.....ton.11.65 - —
Eagle Mountain, Va.....ton.10.00 - —
Engle, W. Va.....ton.11.50 - —
Farnams, Mass. .....ton.11.50 - —
Gibsonburg, Ohio.....ton. 9.50 - —
Hannibal, Mo.....ton. 9.50 - —
Keystone, Ala. .....ton.12.25 - —
Knoxville, Tenn.....ton.11.50 - —
LeRoy, Minn.....ton.10.50 - —
Limedale, Ark.....ton.10.00 - —
Longview, Ala.....ton.12.25 - —
Manistique, Mich.....ton. 9.50 - —
Marblehead, Ohio.....ton.10.50 - —
Mitchell, Ind.....ton.10.00 - —
Lime, hydrated, Newala, Ala.....ton.12.25 - —
Petoskey, Mich.....ton.10.00 - —
Port Island, Mich.....ton. 9.00 - —
Rapid City, S. Dak.....ton.12.00 - —
Rockland, Maine.....ton. 9.00 - —
Ripplemead, Va.....ton.10.00 - —
Scioto, Ohio.....ton. 8.00 - —
Sherwood, Tenn.....ton.12.14 - —
Sherwood, Wis.....ton.10.00 - —
Springfield, Mo.....ton. 9.00 - —
Woodville, Ohio.....ton. 8.50 - —
York, Pa.....ton.11.50 - —
Spray, paper bgs., Adams, Mass..ton.11.70 - —
Annville, Pa.....ton.11.50 - —
Bellefonte, Pa.....ton.11.50 - —
Carey, Ohio.....ton.11.00 - —
Engle, W. Va.....ton.11.50 - —
Farnams, Mass.....ton. 9.50 - —
Gibsonburg, Ohio.....ton.10.00 - —
Marblehead, Ohio.....ton.10.00 - —
Rockland, Me.....ton.10.00 - —
Scioto, Ohio.....ton.10.00 - —
Woodville, Ohio.....ton.10.00 - —
York, Pa.....ton.11.50 - —
Lime salts (see Calcium).
Lime-ammonia-nitrogen, 20.5% N (see Ammonium nitrate-limestone).
Limestone, grd., bulk, works...ton. 1.40 - —
Linalool, ex bois de rose.....lb. 4.50 - 6.85
ex lignaloe wood .....lb. 6.50 - 7.00
Linalyl acetate, ex bois de rose, bots.lb. 4.35 - 7.20
ex lignaloe wood, bots.....lb. 8.25 - 8.40
ex petitgrain, bots.....lb. 5.10 - 6.35
Linden flowers with leaves, bls.....lb. .33 - .34
without leaves, bls.....lb. .31 - .35
Linseed meal, 34% bulk, Midwest mills. ton.70.00 - —
Litharge, com'l, powd., bbls., c.l., ship't point, frt. alld..lb. .10¼ - —
l.c.l., same basis.....lb. .20¼ - —
Lithium bromide, bot., works, frt. equald..lb. 1.90 - —
Carbonate, NF, bbls., kgs.....lb. 1.10 - 1.15
Chloride, dms.....lb. 1.15 - 1.65
Citrate, bbls., dms., kgs.....lb. 1.30 - 1.45
Fluoride, bbls.....lb. 1.95 - —
Hydroxide, dms.....lb. 1.15 - 1.25
Lithopone, ordinary, bgs., c.l., ship't point..lb. .06¾ - —
l.c.l., same basis.....lb. .06¾ - .06¾
Titanated (high-strength), bgs., c.l. lb. .08¼ - —
smaller lots.....lb. .08½ - —
Lithopone f.o.c. Cst. prices ⅜c. higher
Liverwort leaves, bls.....lb. .88 - .95
Lobelia herb, bls.....lb. .75 - .80
Lobeline sulphate, bots., works...oz. 25.50 -38.00
Logwood extract, crystals, No. 1, bbls., l.c.l..lb. .38½ - —
No. 2, bbls., l.c.l.....lb. .36½ - —
liquid, No. 1, bbls., l.c.l.....lb. .18½ - —
No. 2, bbls., l.c.l.....lb. .17½ - —
No. 3, bbls., l.c.l.....lb. .17 - —
No. 4, bbls., l.c.l.....lb. .16½ - —
solid, No. 1, bxs., l.c.l.....lb. .33 - —
No. 2, bxs., l.c.l.....lb. .31 - —
No. 3, bxs., l.c.l.....lb. .28½ - —
No. 4, bxs., l.c.l.....lb. .28 - —
No. 5, bxs., l.c.l.....lb. .26½ - —
No. 6, bxs., l.c.l.....lb. .44½ - .49¼
Lovage root, imp., bls.....lb. 1.20 - 1.25
Lupulin, NF VII, tins.....lb. 7.00 - 8.00
Lycopodium, cs.....lb. 2.00 - 2.50

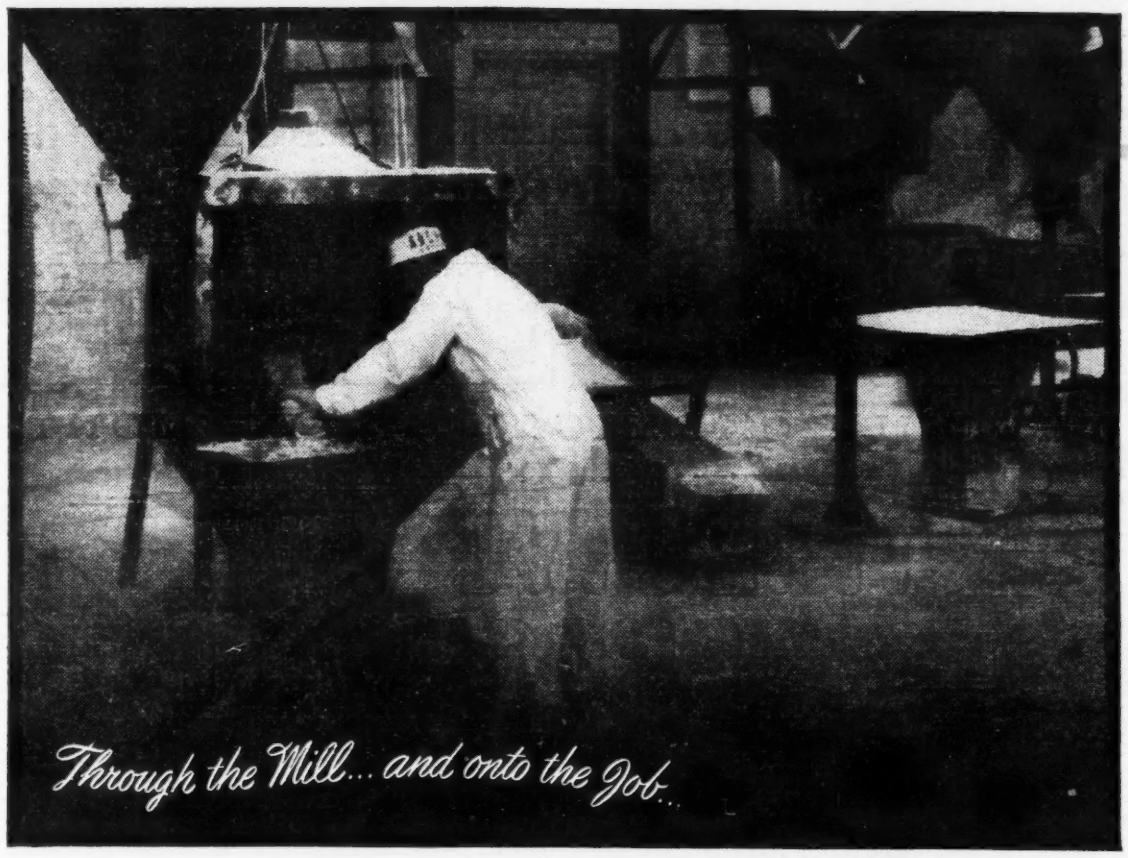
## Kerosene—Magnesium Hydroxide

## M

Mace, No. 1, Siauw, cs.....lb. 1.30 - 1.35
East Indian, bgs., futures.....lb. 1.28 - 1.30
Papua, bgs., futures.....lb. 1.15 - 1.20
West Indian, bgs.....lb. 1.40 - 1.42
broken .....lb. 1.10 - 1.15
Madder, Dutch, bgs.....lb. .29 - .32
Magnesia, calcined, tech., bbls., works..lb. .29 - —
USP, bbls.....lb. .31 - .33
Magnesium arsenate, bgs., cans, works..lb. .20 - .30
Bromide, dms. .....lb. .90 - 1.00
Carbonate, tech., bgs., c.l., frt. equald..lb. .08 - —
l.c.l., frt., alld.....lb. .09 - —
bbls., c.l., frt. equald.....lb. .09¼ - —
l.c.l., frt. alld.....lb. .10¼ - —
kgs., c.l., frt. equald.....lb. .10½ - —
l.c.l., frt. alld.....lb. .11½ - —
USP, bgs., c.l., frt. equald.....lb. .09½ - —
l.c.l., frt. alld.....lb. .10½ - —
bbls., c.l., frt. equald.....lb. .10½ - —
l.c.l., frt. alld.....lb. .11½ - —
kgs., c.l., frt. equald.....lb. .11½ - —
l.c.l., frt alld.....lb. .12½ - —

Magnesium carbonate is quoted frt. alld to N. J., except to Atlantic, Burlington, Cape May, Cumberland, Gloucestershire, Ocean, and Salem counties, and to Phila. county, Pa. Frt. equald, with N. Y. C. on all other destinations.

Chloride, anhyd., bbls., works...lb. 12¾ - —
flake, bbls., c.l., works.....ton.40.00 - —
l.c.l., works.....ton.44.00 -46.00
Fluoride, bbls.....lb. .20 - .25
Hydroxide, medicinal, bbls., dms., kgs..lb. .29 - .30


...White Lead adds MORE of the Properties that Make Good Paint

From mixing and grinding to the finished job, White Lead helps make paint better 14 ways.

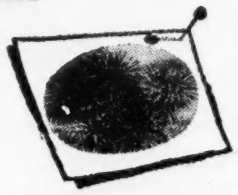
Look at the list! What other pigment gives you so many paint-making properties?

Remember, too, White Lead imparts these qualities to paint in well-balanced proportion.

Science shows that many of White Lead's paint-making advantages are directly traceable to this pigment's ability to form lead "soaps." See the "soap story at the right.

Let our technical staff help you fit "Dutch Boy" Basic Carbonate White Leads into your formulations. You'll get recommendations backed by more than 30 years of continuous paint-fence testing... the longest project of its kind on record.

1. Mixing and Grinding Ease
2. Package Stability
3. Hiding
4. Brushability
5. Leveling
6. Drying Action
7. Whiteness
8. Fool-Proofness
9. Film Strength
10. Flexibility
11. Tint Retention
12. Adhesion
13. Gloss
14. Weather Resistance



Lead "Soaps" Mean Better Paint

White Lead combines with oil to produce a distinctive type of "soap" formation, having a fibrous structure. Multiple projections radiate from a central core.

These formations spread out, intermesh and mechanically reinforce the paint film, giving it toughness, flexibility, adhesion and weather resistance.

White Lead also combines readily with linseed oil. That's why this pigment wets so easily and mixes and grinds so well.

Dutch Boy Basic Carbonate White Leads
Reg. U.S. Pat. Off.

NATIONAL LEAD COMPANY—New York 6; Buffalo 3; Chicago 8; Cincinnati 3; Cleveland 13; Pittsburgh 12; St. Louis 1; San Francisco 10; Boston 6, (National Lead Co. of Mass.); Philadelphia 7, (John T. Lewis & Bros. Co.).

## Magnesium Hypophosphite—Molybdate Orange

Magnesium hypophosphite, cns.....lb. 1.45 - —
Laurate, bbls. .....lb. .46 - .47
Metal, 98.8%, ingots, cs., works...lb. .20½- —
sticks, cs. .....lb. .34 - .38
Oleate, precip., bbls.....lb. .40½- —
Oxide (see Magnesia, calcined).
Peroxide, 15%, dms., works.....lb. 1.00 - 1.05
Pinosilicate, tribasic, USP, bbls....lb. .62 - .67
Silicate (see Talc).
Silicofluoride, bbls., works.....lb. .10 - —
Stearate, ctns., 2,000 lbs. to c.l...lb. .56 - —
smaller lots.....lb. .49 - —
Sulphate (see Epsom salt).
Trisilicate, dms., 1,000-lb. lots.....lb. .37 - —
smaller lots.....lb. .42 - —
Magnesite, chem. grade, bgs., c.l., mines, Calif..ton.30.00 - —
dead-burnt, bulk, c.l., Chewalan, Wash. ton.27.00 - —
Maleic anhydride, dms., c.l.....lb. .27½- —
l.c.l. .....lb. .28½- —
Malva flowers, black, bls.....lb. No stocks
Blue, bls. .....lb. 1.35 - 1.40
Leaves, bls. .....lb. .40 - .42
Mamma root, bls .....lb. .49 - .50
Mandrake root, bls.....lb. .30 - .32
Manganese acetate, dms.....lb. .25½- —
Arsenate, bgs .....lb. .12 - .12½
Borate, tech., bbls.....lb. .16 - .18
Carbonate, bbls. .....lb. .19 - —
Chloride, anhyd., dms., works....lb. .18 - .19
Dioxide, African, battery, 84%-87% bbls., 28-40 tons, works..ton.74.00 - —
small lots, works..ton.77.00 -82.00
burlap bgs., c.l., works.....ton.71.75 - —
l.c.l., works .....ton.74.75 -79.79
paper bgs., c.l., works.....ton.70.00 - —
l.c.l., works .....ton.73.00 - —
85-90%, bbls., c.l., works..ton.74.00 - —
smaller lots, works .....ton.77.00 -82.00
Manganese glycerophosphate, fib. dms. lb. 4.25 - —
Hydrate, bbls., dlvd.....lb. .26 - —
Iodide jars .....lb. 5.55 - —
Linoleate, liquid, 4.35% Mn, dms.lb. .33½- —
solid, precip., 8.2% Mn, bbls....lb. .41½- —
Metal, cs., dlvd. East.....lb. .30 - .32
Naphthenate liquid, 6% Mn, dms..lb. .22½- —
Oleate, fused, bbls.....lb. .41¾- —
Resinate, fused, 3½% Mn, bbls....lb. .09 - .10½
precip., dms. .....lb. .16 - —
Sulphate, fertilizer grade, 65%, bgs., c.l., dlvd. S. E..ton.60.00 - —
l.c.l., dlvd. S. E.....ton.67.00 - —
feed grade, 80%, bgs.....lb. .05¼- .07
75%, bgs., c.l., dlvd. S. E....ton.68.50 - —
l.c.l., same basis.....ton.75.50 - —
Tallate, liquid, 4% Mn, dms.....lb. No prices
solid, 8% Mn, dms.....lb. No prices
Mangrove bark, E. Africa, 38% tannin, c.l., ex dock..ton.63.00 - —
Manna, flake, large, cs.....lb. 1.50 - 1.60
small, cs.....lb. .80 - .85
Mannitol, com'l, bbls., works....lb. .38 - .43
reagent, cs., works.....lb. .85 - —
Marjoram, Argentine, bls.....lb. .14 Nom.
Chilean, bls .....lb. .29 - .29½
French, bls. .....lb. .34 - .35
Matico leaves, bls.....lb. .17 - .18
Menadione, USP, bots., works..gram. .10 - —
Menthol, natural, USP, Brazilian, cns..lb. 9.75 -10.00
synthetic, tech., cns.....lb. 6.00 - 6.40
USP, laevo, cns.....lb. 8.90 - 9.35
Menthyl salicylate, tins.....lb. 3.00 - 3.10
Mercury bichloride (see Corrosive sublimate).
Bisulphate, dms.....lb. 2.13 - 2.18
Chloride (see Calomel).
Cyanide, cryst., powd.....lb. 3.27 - 3.32
Iodide, red, NF dms.....lb. 4.17 - —
Yellow, NF, fib. dms.....lb. 4.27 - —
Metal (see Quiuksilver).
Oxide, red, NF (see Red precipitate).
yellow, tech. (see Yellow, mercury oxide)
USP, fib. dms.....lb. 2.44 - 2.46
Mesityl oxide, dms., c.l., dlvd.....lb. .13 - —
l.c.l., dlvd. .....lb. .13½- —
tanks, dlvd. .....lb. .11½- —
Metachloranilin, dms., works.....lb. .75 - —
Metacresol, 98%, dms., works.....lb. .65 - .80
Metanitroparatoluidin, bbls .....lb. 1.22 - 1.33
Metaphenylenediamine, kgs.....lb. .76 - —
Metatoluidine, bbls., works.....lb. .80 - —
Metatolylenediamine, kgs.....lb. .77 - —
Methanol, natural, dms., c.l., frt. alld. gal. .74 - 1.10
l.c.l., frt. alld.....gal. .77 - 1.12
tanks, frt. alld.....gal. .66 - 1.00

Prices on natural methanol W. of Miss. 3c. higher synthetic, eastern production, Zone 1,
dms., c.l., frt. alld..gal. .37½- .38½
l.c.l., frt. alld.....gal. .41 - .42
tanks, frt. alld.....gal. .27 - .28
zone 2, dms., l.c.l., frt. alld..gal. .45 - —
l.c.l., ex-whse.....gal. .47½- —
tanks, frt. alld.....gal. .33 - —

Synthetic methanol Zones are: Zone 1 is all continental U. S., E. of eastern boundaries of Ariz., Idaho, Mont., and Utah. Zone 2 is remainder of the U. S., west of above state boundaries, comprising Ariz., Calif., Idaho, Mont., Nev., Ore., Utah, and Wash.

Methanol, synthetic, Texas production, Midwest and Gulf states, dms., c.l., works, frt. alld..gal. .37½- —
tanks, frt. alld.....gal. .27 - —
West of Rockies, dms., c.l., frt. alld..gal. .43 - —
tanks, frt. alld.....gal. .33 - —
Methyl acetate, non-ret, dms., c.l. dlvd. zone 1...lb. 15½- —
l.c.l., same basis.....lb. 15¾- —
Hydrogenated, non-ret, dms., c.l., dlvd., zone 1..lb. 16½- —
l.c.l., same basis.....lb. 17½- —
Acetoacetate, dms., c.l., works....lb. .47 - —
l.c.l., same basis.....lb. .48 - —
tanks, works.....lb. .46 - —

Methyl acetoacetate prices, frt. alld W. 1c. higher.

Acetone, natural, group A, dms., extra, c.l., E of Miss., frt. alld.gal. .50 - —
l.c.l., same basis.....gal. .57 - —

Natural Methyl acetone group A prices W. of Miss 3c. per gal higher.

group B, dms., incl., c.l., E. Miss., frt. alld..gal. .60 - .65
l.c.l., same basis.....gal. .71 - .75
tanks, same basis.....gal. .50 - .80
synthetic, dms., c.l., works, frt. alld E..gal. .61½- —
frt. alld. W.....gal. .64 - —
l.c.l., works, frt. alld. E....gal. .65 - —
frt. alld. W.....gal. .68½- —
tanks, works, frt. alld. E....gal. .52 - —
frt. alld. W.....gal. .55½- —

Methyl acetone, synth. East territory is all States East of and including Colo., Mont., N. Mex. and Wyo. West territory, all States West of those four

Alcohol (see Methanol).
Anthranilate, 500 lbs. or more....lb 2.10 - —
smaller lots .....lb 2.20 - 3.00
Benzoate, cns. .....lb. .55 - 1.20
Bromide, cns.....lb. .63 - .65
cyls. .....lb. .55 - .70
Chloride, indust., cyl., works.....lb. .16 - —
tanks, multi-unit, works.....lb. .14½- —
single-unit, works.....lb. .14 - —
refrigeration, indust. consumers, refrigeration machinery mfrs., cyls., dlvd..lb. .33 - —
retail refrigeration consumers or service men, cyls., dlvd..lb. .41 - —
Cinnamate, cns.....lb 1.05 - 3.50
Formate, dms.....lb .89 - —
Heptin carbonate, bots.....lb.36.00 -38.00
Iodide, bots., cbys.....lb 4.31 - 4.32
Lactate, dms., l.c.l., works..... lb. .35 - —
Methacrylate, M-1, dms., works..lb. .45 - —
cns., works.....lb. .48 - .58
F-1, cns., works.....lb. .60 - —
Salicylate, dms., 500 lbs.....lb. .40 - —
25-50 lbs. .....lb .45 - —
Methylal, refined, 95%, dms., c.l....lb. .06 - —
l.c.l., works.....lb. .07 - —
tanks, works .....lb .01½- —
Methylamyl ketone, cns., dms., works. lb No stocks
Methylcellulose, special vis. (4,000 cps.), fib. ctns., c.l., frt. alld..lb .68 - —
2,000 lbs. and more, same basis lb .70 - —
smaller lots, frt. alld. on 100 lbs. lb .75 - .80
standard vis. (15-1,500 cps.), fib. ctns., c.l., frt. alld. lb. .62 - —
2,000 lbs. and more, same basis lb. .63 - —
smaller lots, frt. alld. on 100 lbs..lb .68 - .73
Methylene blue, USP, 100-lb. lots, kgs., frt. equald..lb 2.42 - —
smaller lots, kgs., same basis... lb 2.52 - 2.57
Methylene chloride, indust., dms., c.l., dlvd. E..lb. .12½- —
l.c.l. dlvd., E.....lb .13½- —
tanks, dlvd., E.....lb. .11½- —
Methylenedianilin, dms., ton lots, frt. alld. lb .36 - —
smaller lots, same basis.....lb .37 - —
Methylethyl ketone, dms., dlvd.....lb. .11½- —
l.c.l., dlvd. .....lb. .12 - —
tanks, dlvd. .....lb. .10 - —
Methylhexyl ketone, tech., dms., works. lb. .60 - —
Methylionone, A, cns.....lb. 6.55 - 8.80
D, cns.....lb. 7.50 - 9.25
prime, cns.....lb 4.55 - 6.40
Methylisobutyl carbinol (see Carbinol, methylisobutyl).
Methylisobutyl ketone, dms., c.l., dlvd lb. .15 - —
l.c.l., dlvd.....lb. .16 - —
tanks, dlvd.....lb. .13½- —
Methylnaphthyl ketone, cns.....lb. 3.00 - 3.75
Methylpentanediol, dms., works, dlvd. lb. .17½- —
l.c.l., works, dlvd.....lb. .18½- —
tanks, works, dlvd.....lb. .16 - —
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint, plastic, 100 mesh, bgs., c.l., works..lb. 03¾- —
roofing, 20 to 80 mesh, works...lb. 03¾- —
wet-grd., biotite, bgs., c.l., works, frt. alld. E..lb. 05½- —
l.c.l., ex whse. or frt. alld. E. lb. 06¼- —
extra fine, bgs., c.l., works, frt. alld. E..lb. .05½- —
l.c.l., ex whse. or frt. alld. E. lb. .06¼- —
paint or lacq., bgs., c.l., works, frt. alld. E..lb. .07 - —
l.c.l., ex whse. or frt. alld. E.lb. .07½- .07¾
rubber, bgs., c.l., works, frt. alld. E..lb. .06¾- —
l.c.l., ex whse. or frt. alld. E. lb. .07¼- .07¾
wallpaper, bgs., c.l., works, frt. alld. E..lb. .07 - —
l.c.l., ex whse. or frt. alld. E. lb. .07½- .07¾
white, extra fine, bgs., c.l., works, frt. alld. E..lb. .07 - —
l.c.l., ex whse. or frt. alld. E. lb. .07¾- —

Mica, wet-grd. W. of Miss R., ½c. higher. W. of Rockies, 1c. higher.

Milk powder, skimmed, roller, bbls., c.l..lb. .15 - .16¾
spray, bbls., c.l.....lb. .16¼- .17½
Whole, roller, bbls., c.l.....lb. .41½- .45¼
spray, bbls., c.l.....lb. .41 - .45
Sugar, edible, bbls., works, 30,000-lb. lots..lb. .24 - —
2,000-lb. lots .....lb. .24¾- —
200-1,800-lb. lots .....lb. .25¼- —
USP, bbls., works, 3,000-lb. lots.lb. .26 - —
2,000-lb. lots .....lb. .26¾- —
200-1,800-lb. lots .....lb. .27¼- —
Mineral spirits (see Petroleum, mineral spirits).
Molasses, blackstrap, tank.....gal. .26½- .27
Molybdate orange (see Orange, molybdate).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SPECIFIC GRAVITY: 0.973 to 0.983 at 20°C./20°C.
ACIDITY: Not more than 0.05%, calculated as phosphoric acid.
WATER: No turbidity when one volume is mixed with 19 volumes of 60° Bé. gasoline at 20°C.
COLOR: Water-white.

PROPERTIES:

MOLECULAR WEIGHT: 266.32.
ODOR: None.
REFRACTIVE INDEX: 1.4226 at 20°C.
BOILING POINT: 177°C. at 27 mm. of mercury.
LATENT HEAT OF VAPORIZATION: 55.1 calories per gram at 289°C.
DIELECTRIC CONSTANT: 7.973 at 30°C.
MELTING POINT: Below −80°C.
FLASH POINT: 146°C. (294.8°F.)
SAYBOLT VISCOSITY: 38.6 seconds at 85°F.
WEIGHT PER U. S. GALLON: 8.13 pounds at 68°F.

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An EFFECTIVE DIELECTRIC in capacitors and condensers!
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3. ELECTROLYTE
   Sp. Gr. 1.835

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## Molybdenum Metal—Oil, Fishliver

Molybdenum metal, 99% Mo. powd., kgs..lb. 2.00 - 3.00
Trioxide, pure, kgs., works, basis Mo. content..lb. .95 - —
technical, kgs., works, basis Mo. content..lb. .80 - —
Monochlorobenzene, dms., c.l., works, frt. equald..lb. .06½- .08
l.c.l., works ..lb. .07 - .09
smaller containers, works..lb. .09 - .12
tanks, works, frt. equald..lb. .06 - 06½
Monoethanolamine, dms., c.l., frt. alld. E..lb. .26½- —
l.c.l., same basis..lb. .27½- —
smaller containers, same basis..lb. .30½- —
tanks, same basis..lb. .25 - —
Monoethylamine, dms., c.l., wks. basis 100%..lb. .22 - —
l.c.l., same basis..lb. .23 - —
tanks, same basis..lb. .20 - —
Monomethylamine, anhydrous, cyl., works, basis 100%..lb. .41½- .44½
25%-40%, dms., c.l., same basis..lb. .32 - —
l.c.l., same basis..lb. .33½- —
tanks, same basis..lb. .30 - —
Monononylnaphthalene, tanks, wks.lb. .16 - —
Monosodium glutamate (see Sodium glutamate, monobasic).
Phosphate (see Sodium phosphate, monobasic).
Monotertiarybutylmetacresol, dms., l.c.l., works..lb. .81 - —
Monotertiarybutylmetacresol, dms., l.c.l., works..lb. .81 - —

Morphine, cns., 25 ozs.....oz.12.40 - —
Acetate, cns., 25 ozs.....oz. 9.90 - —
Hydrobromide, cns., 25 ozs.....oz. 9.80 - —
Hydrochloride, cns., 25 ozs.....oz. 9.90 - —
Sulphate, cns., 25 ozs.....oz. 9.90 - —
Morpholine, dms., c.l., works.....lb. .59½- —
l.c.l., works.....lb. .60 - —
tanks, works.....lb. .58 - —
smaller containers, works.....lb. .75 - —
Mountain ash berries, bgs.....lb. .75 - .76
Mullein leaves, bls.....lb. .12 - .13
Musk, nat., Tonquin, grains, hots..oz.38.00 -55.00
synthetic, ambrette, cns., 5-lb..... 5.65 - —
Ketone, cns., 100 lbs. or more..lb. 4.60 - 4.95
25 lbs. .....lb. 4.70 - 5.05
5 lbs. .....lb. 4.60 - 5.45
Xylol, cns. .....lb. 1.60 - 1.80
25 lbs. .....lb. 1.70 - 1.90
5 lbs. .....lb. 1.80 - 2.00
Musk root, bls.....lb. No prices
Mustard seed, Calif., brown.....lb. .21 - .21½
Danish, yellow, bgs.....lb. .16 - .16½
Dutch, yellow, bgs.....lb. .16 - .16½
Montana, brown, bgs., source....lb. .11 - .11½
Oriental, bgs. .....lb. .07 - .07½
yellow, bgs., source.....lb. .14 - .14½
Washington, yellow, bgs.....lb. .16 Nom.
Myrobalans, J1, good quality, ex dock. ton.54.00 -55.00
J2, ex dock.....ton.47.00 -48.00

## N

Naphtha, painters (see Petroleum naphtha, V. M. & P.).
Solvent (see S)
Naphthalene, dom., crude, 74°, bgs., tanks, same basis..lb. .05¾- .07¼
78°, bbls., c.l., same basis.....lb. .07 - .08
l.c.l., same basis.....lb. .07½- .08½
tanks, same basis.....lb. .06 - .07½
refined, industrial, bbls.....lb. .11 - —
bgs., c.l., same basis.....lb. .10½- —
tanks, same basis.....lb. .10 - —
balls, flakes, wholesalers, jobbers, 50-lb. cs., c.l., same basis..lb. .12 - .12½
1-lb. pkgs., c.l., same basis.lb. .13 - .13½
Neocinchophen, USP, dms., works..lb. 7.00 - 7.10
Nepheline syenite, glass, 24 mesh, bulk, Rochester, N. Y.....ton.14.25 - —
pottery, 200 mesh, bulk, Rochester, N. Y..ton.18.25 - —

Nepheline syenite in bgs., $3 per ton higher than bulk.

Nerolin, crys., cns.....lb. 1.70 - 2.25
Niacin (see Acid, nicotinic).
Nacinamide (see Nicotinamide)
Nickel, carbonate, bbls.....lb. .41 - —
Chloride, bbls. .....lb. .21½- —
Cyanide, bots., dms.....lb. 1.75 - 2.00
Metal, electro cathodes, cs.....lb. .33¾- —
Oxide, black, bbls.....lb. .38 - —
Sulphate, bbls., dlvd.....lb. .15 - .15½
Nicotinamide, USP, dms., works..kilo. 9.50 - 9.80
Hydrochloride, dms., works.....kilo. 9.00 - 9.10
Nicotine sulphate, 40%, dms., dealers, frt. alld. over 50 lbs..lb. .988 - —
tins, dealers.....lb. 1.105 - —
Nikethamide, bots, cbys.....lb. 5.50 - 6.60
Nitercake, bulk, works.....ton. No stocks
Nitrobenzene, dbl. dist., dms., c.l..lb. .09 - .09½
l.c.l. .....lb. .10 - .11
tanks .....lb. .08 - .08½

Nitrocellulose, ester soluble, 30-35 cps., ¼, ½, 5-6, 15-20, 30-40, 60-80 and 125-175 secs., bbls., c.l., works, dry weight..lb. .28 - —
l.c.l., same basis.....lb. .29 - .31
8-25 cps., bbls., c.l., same basis..lb. .30 - —
l.c.l., same basis.....lb. .31 - .33
250-400 secs. and 600-1,000 secs., bbls., c.l., same basis..lb. .32 - —
l.c.l., same basis.....lb. .33 - .35
spirit-soluble, 30-35 cps., ¼, ½, 5-6 and 40-60 secs., bbls., c.l., same basis..lb. .34 - —
l.c.l., same basis.....lb. .35 - .37

Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Barrels extra, but returnable.

Nitrogen solution, tanks, works, N ton.107.00 - —
Nitrogenous process tankage, bulk, works, ammo. unit-ton. 3.25 - 3.70
Sewage sludge, bulk, works, unit ton.4.15 + 40-
Nitromethane, dms., c.l., works.....lb. .25 - —
Nitropropane, 1, dms., works.....lb. .25 - —
2 dms., works.....lb. .25 - —
Nonylnaphthalene blend (mono and di), tanks, works..lb. .14 - —
Nutgalls, Aleppo, bgs.....lb. .50 - —
Chinese, bgs. .....lb. .44 - —
Istrian, bgs. .....lb. .29 - —
Nutmegs, East Indian, bgs., futures, afloat..lb. .54 - .55
West Indian, bgs.....lb. .57 - .57½
futures .....lb. .57 - .57½
Nux vomica, bls.....lb. .09 - .10
powdered, bbls., bxs.....lb. .12 - .13

## O

Oakbark extract, 25% tannin, bbls., c.l., works..lb. No stocks
Octane, 100°-140° C, industrial grade, dms., c.l., group 3..gal. .19 - —
l.c.l. .....gal. .21 - .60
tanks, group 3..... .....gal. .15½- —
Octanol (see Alcohol, ethylhexyl).
Oil, almond, bitter, artificial (see Benzaldehyde).
Bitter, F.P.A., bots.....lb. 4.45 - 5.00
NF, bots.....lb. 4.90 - —
Sweet, dms., cns.....lb. .80 - 1.30
Angelica root, bots.....lb.120.00 -250.00
Seed, bots.....lb.110.00 -200.00
Anilin (see A).
Anise, USP, Chinese, dms.....lb. .75 - 1.25
Russian, cns.....lb. 3.25 - 3.75
Apricot kernel, cns.....lb. .65 - .85
Avocado, cns., dms.....lb. 1.00 - 1.10
Babassu, tanks .....lb. .28 - —
Bay, NF, Puerto Rican, 50-55%, cns. lb. 1.20 - 2.25
55-60%, cns.....lb. 1.20 - 2.35
60-65%, cns.....lb. 2.50 - —
West Indian, 50-55%, cns.....lb. 1.20 - 1.65
Bergamot, artif., cns.....lb. 2.50 - 4.25
natural, Italian, cns.....lb. 3.90 - 6.00
Birch (see Oil, sweet birch).
Birchtar, crude, cns.....lb .95 - 1.76
rectified, cns.....lb. 4.25 - —
Bois de rose, Brazil, cns.....lb. 2.90 - 4.75
Mexican (see Oil, lignaloe wood).
Bone dms., works.....gal. .65 - .70
Cajeput, tech., dms.....lb. 2.15 - 2.45
redistilled, USP IX, cns.....lb. 2.60 - 4.50
Calamus, cns. .....lb.20.00 -28.00
Camphor, natural, white, cns.....lb. .40 - .75
synthetic, dms.....lb. .15 - .40
Cananga, native, cns.....lb. 4.75 - 9.10
rectified, cns. .....lb. 6.00 -12.00
Capsicum (see Capsicum oleoresin)
Caraway, NF, cns.....lb. 4.75 - 6.50
Cardamom, bots. .....lb.21.00 -31.50
Cassia, USP, cns.....lb. 2.60 - 3.75
Castor, blown, ret. dms., c.l.... ..lb. .26 - —
l.c.l. .....lb. .27 - .27½
cold-pressed, USP, ret. dms., c.l.lb. .24 - —
lb. .24 - —
l.c.l. .....lb. .25 - —
tanks .....lb. .23 - —
dehydrated, bodied, dms., c.l....lb. .26½- —
l.c.l. .....lb. .27½- —
tanks .....lb. .26 - —
unbodied, dms., c.l.....lb. .25½- —
tanks .....lb. .25 - —
hydrogenated, bgs., c.l., works..lb. .37 - —
l.c.l., same basis.....lb. .38 - —
No. 3, tech., ret. dms., c.l.....lb. .22½- —
l.c.l. .....lb. .23½- —
tanks .....lb. .22½- —
sulphonated, 50% (48% fat), dms. lb. .15 - .16
75% (60-62% fat), dms.....lb. .20 - .20½
Cedarleaf, USP, cns., dms.....lb. 2.15 - 2.85
Cedarwood, cns. .....lb. .51 - .95
dms. .....lb. .42 - .85
Celeryseed, bots. .....lb.14.00 -20.00
Chaulmoogra, NF, cns., dms.....lb. .56 - —
Chinawood (see Oil, tung).
Cinnamon bark, bots.....lb.33.00 -73.00
Leaf, Ceylon .....lb. 1.50 - 1.75
Seychelle .....lb. 1.20 - —
Citronella, Ceylon, cns.....lb. .70 - 1.05
Java, cns. .....lb. 1.35 - 1.75
Clove, USP, cns.....lb. 1.30 - 1.70
Coconut, crude, tanks, Atlantic ports, lb. .26 - —
Pac. coast .....lb. .25 - —
refined, Cocuin type, tax incl., dms., l.c.l. .lb. .34½ Nom.
deodorized, tax incl., dms., l.c.l. lb. .37 Nom.
Cod, Newfoundland, dms.....lb. .24 - .25
Codliver, USP, dms..... ...gal. 2.60 - 2.70
Coriander, bots. .....lb.34.00 -58.50
Corn, crude, tanks, works.....lb. .33 - —
foots, acid, 95%, tanks, dlvd. E. lb. .13 Nom.
raw, 50%, tanks, dlvd. E....lb. .06¾ Nom.
refined, tanks, mills.....lb. .39 - —
Costus, bots.... ..... .....oz 42.00 - —
Cottonseed, crude, tanks, works..lb. .32 - —
foots, acid 95%, tanks, dlvd. E lb. .13 Nom.
raw, 50%, tanks, dlvd. E....lb. .06¾ Nom.
refined, dms., c.l.....lb. .40½- —
l.c.l. .....lb. .42 - .42½
tankcars .....lb. .39 - —
Creosote (see Creosote, coaltar).
Croton, NF, cns.....lb 4.75 - 5.50
Cubeb, cns. .....lb. 6.75 -10.00
Crude (see Petroleum, crude).
Cumin, bots. .....lb. 6.25 -11.50
Cypress, bots. .....lb.11.00 -15.00
Degras (see D).
Dillseed, bots. .....lb. 9.00 - 9.50
Dillweed, bots. .....lb. 8.00 - 9.50
Dip (see D).
Erigeron, USP, cns.....lb. 2.30 Nom.
Eucalyptus, rect., USP, 80-90%, cns. lb. .90 - 1.45
70-80%, cns.....lb. .80 - 1.30
Fennel, sweet, cns. .....lb. 3.65 - 4.50
Fir, Canada, cns.....lb. 2.35 - —
Fishliver, concentrating or feed, 6,000 to 12,000 A units, dms.... 1,000,000 units. .22½- —
20,000 to 80,000 A units, dms. 1,000,000 units. .30 - .38
pharmaceutical, 50,000 to 125,000 A units, dms..1,000,000 units. .36 - .37½
pharmaceutical or food, 200,000 A units, dms..1,000,000 units. .42 - —
concentrate, 100,000 A units, dms.. 1,000,000 units. .38 - —
200,000 A units, dms. 1,000,000 units. .42 - —

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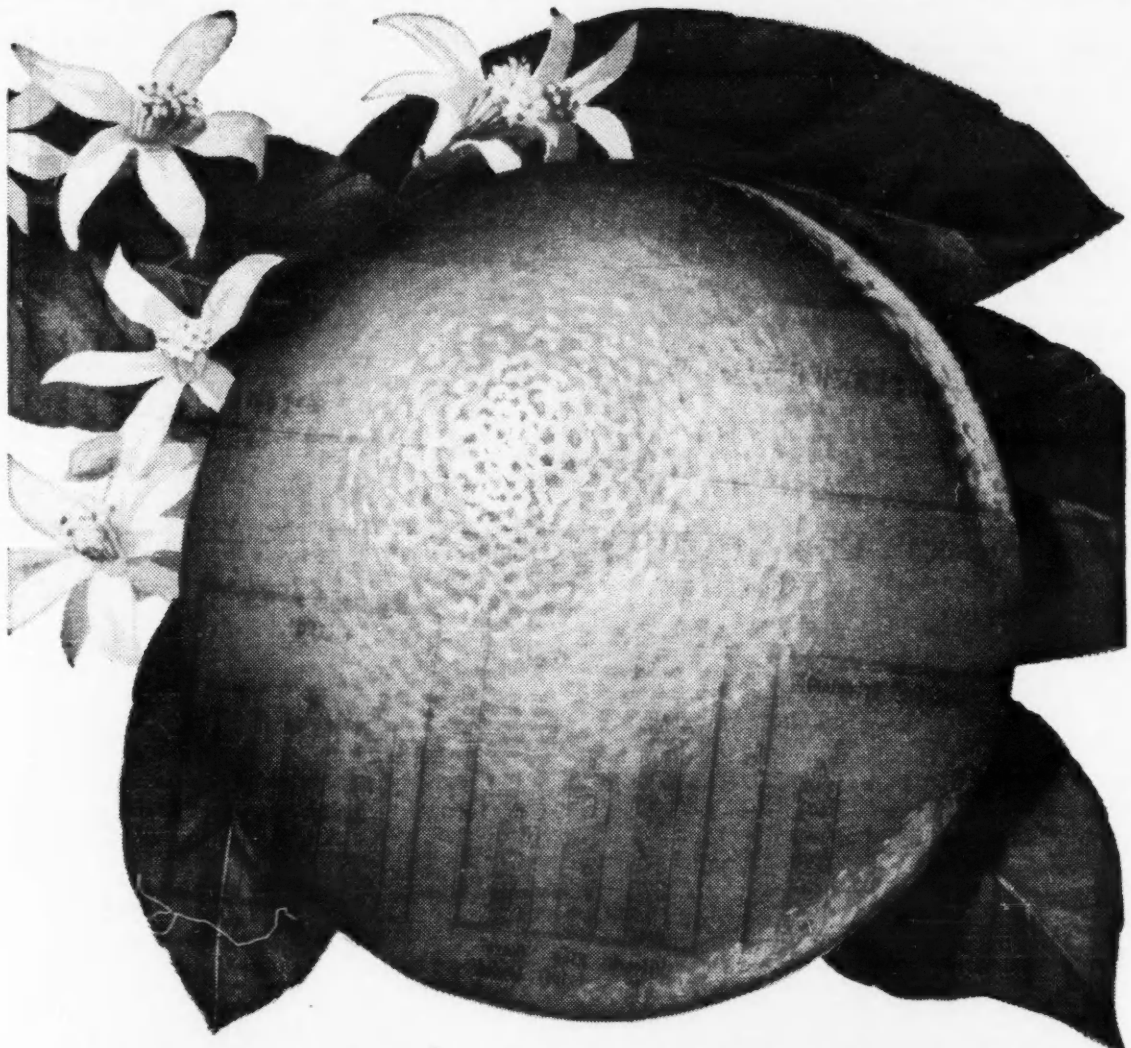
RUBBER ITEMS

Oil, fishliver, concentrate, 500,000 A units, dms.....1,000,000 units. .46 - —
1,000,000 A units, dms. 1,000,000 units. .49 - .54
Fuel (see Petroleum fuel oil).
Fusel (see F)
Garlic, pure, bots.....oz.15.00 - —
Gaultheria (see Oil, wintergreen).
Geranium, Algerian, cns.....lb.14.00 -21.00
Bourbon, cns. .....
Russian, cns.....lb. No stocks
Turkish (see Oil, palmarosa).
Ginger, dist., bots.....lb. 7.75 -13.00
Grapefruit .....lb. 1.15 - 2.00
Grease, No. 1, dms.....lb. .23½- .23¾
extra, winter, strained, dms.....lb. .25¼- .25¾
prime, burning, dms.....lb. .26¼- .26¾
Guaiacwood, cns. .....lb. 2.05 - 4.15
Hemlock, cns.....lb. 2.25 - 2.75
Herring, crude, tanks, Pac. coast..lb. No prices
Juniper berry, NF VIII, bots.....lb. 5.00 - 5.25
Imported, NF, twice rectified..lb. 7.00 - 7.25
Tar, USP (see Juniper tar).
Wood, tech., cns.....lb. .65 - 1.00
Lard (see Oil, grease).
Laurel, bots.....lb. No stocks
Lavandin, cns. .....lb. 1.50 - 3.75
Lavender flower, French, 38-42% ester..lb. 4.25 -10.15
30-32% ester.....lb. 2.85 - 3.10
Russian, 25-lb. .....lb.11.75 - —
Spike, Spanish, pure, cns.....lb. 1.40 - 2.25
tech., cns. .....lb. 1.40 - 2.75
Lemon, natural, USP, Calif., cns..lb. 3.10 - 3.60
Messina .....lb. 3.10 - 4.35
terpeneless, bots. .....lb.32.00 -50.00
Lemongrass, cns., dms.....lb. 1.25 - 2.30
Lignaloe seed, Mexican, cns.....lb. 4.50 - 4.80
Wood, Brazilian (see Oil, bois de rose).
Mexican, cns. .....lb. 3.00 - 5.20
Lime, distilled, Mexican, cns.....lb. 3.75 - 5.00
West Indian, cns.....lb. 4.50 - 6.00
expressed, West Indian, cns....lb. 7.50 -11.25
terpeneless, bot.....lb.35.00 -53.00
Linseed, raw, dms., c.l.....lb. .2940- —
l.c.l. .....lb. .3020- .3050
tankcars .....lb. .2820- —
tankwagon .....lb. .2850- —
Boiled linseed oil .007 higher than raw
Lubricating, at refinery, ex tax,
Group 3, bright stock, 150-160 vis., 10-25 p.p. tanks..gal. .235 - —
neutral, 300 vis., No. 3, col., 0.10 pour, tanks..gal. .21 - .22
200 vis., No. 3, col., 15-25 pour, tanks..gal. .18 - .19
145-155 vis., No. 3, color, 10-25 pour, tanks..gal. .235 - —
Penna., W., cylinder, 600-650 flash, tanks..gal. .33 - .38
cylinder, 600-650 steam refd., tanks..gal. .37 - —
neutral, 70° F, No. 3 color, 150 vis., 25 pour, tanks..gal. .37 - .39
200 vis., 25 pour, tanks.gal. .39 - .41
South Texas, neutral, pale 200 vis., 2½-4 pour, tanks..gal. .11 - .12
red, 200 vis., 4-6½ pour, tanks..gal. 11- 12¼
Mace, dist., cns., dms.....lb. 4.80 - 8.75
Mandarin, Brazilian, cns.....lb. 4.25 - 8.40
Italian, cns.....lb. 8.50 -16.00
Menhaden, crude, tanks, Balto....lb. .18 Nom.
refined, alkali, dms., l.c.l.....lb. .2390- —
kettle-bodied, dms., l.c.l.....lb. .2540- —
light-pressed, dms., l.c.l.....lb. .2240- —
tanks .....lb. .21 - —
Mineral, white (see Oil, white, mineral).
Mirbane (see Nitrobenzene)
Mustard, synthetic, USP, cns.....lb. 1.40 - 1.45
Seed, exp., dms.....lb. .28 - .29
Nevisiool, 15°, dms.....lb. .45 - .46
25°, dms. .....lb. .44 - .45
30°, dms. .....lb. .43 - .44
Neroli, French, bots.....lb.75.00 -230.00
Haitian, bots. .....lb.175.00 -200.00
Nutmeg, dist., cns.....lb 4.75 - 8.75
Ocotea cymbarum, dms.....lb. .52 - 1.15
Officica, liquid, dms., c.l.....lb. .21 Nom.
l.c.l. .....lb. .21 - .21½
tanks .....lb. .20 Nom.
Oleo, extra, tcs., Chicago.....lb. .30 - .31
Olibanum, bots. .....lb. 4.50 - 6.25
extra fine.....lb. 6.25 -10.50
Olive, denat., dms. .....gal. 3.00 - —
edible, Calif., dms. .....gal. 4.25 Nom.
Spanish, dms., duty paid.....gal. 4.50 - —
Moroccan, dms., same basis...gal. 3.90 - 4.00
foots, dms. .....lb. .23 - .23½
tankcars .....lb. .21½- —
sulphonated, 50% (40% fat), dms., c.l. .lb. No stocks
l.c.l. .....lb. No stocks
75% (62% fat), dms., c.l.....lb. No stocks
l.c.l. .....lb. No stocks
Orange, sweet, natural, dist., cns..lb. .75 - 1.25
expressed, USP, Brazilian, cns. lb. 1.40 - 1.95
Calif., cns.....lb. 1.55 - 2.10
Florida, cns., dms.....lb. 1.10 - 1.85
Messina, coppers.....lb. 3.75 - 5.50
West Indian, cns.....lb. 2.25 - 3.75
sesquiterpeneless, bots. .....lb.55.00 -135.00
Origanum, Spanish, cs.....lb. 2.50 - 3.50
Palm, Niger, dms.....lb. No prices
Palmarosa, cns. .....lb. 6.50 - 9.00
Palmkernel, crude, bulk, c.l.f., N. Y. lb. No prices
Paraffin, pale, 100-110 vis. at 100° F, tanks, works..gal. .10 - —
Patchouli, cns. .....lb. 8.75 -25.00
Peanut, crude, tanks, works.....lb. .33 - —
foots, acid, 95%, tanks, dlvd. E..lb. .13 Nom.
raw, 50%, tanks, dlvd. E....lb. .06¾ Nom.
refined, alkali, dms., c.l.....lb. .3052- —
l.c.l. .....lb. .3237- .3297
tanks .....lb. .3032- —
clarified, dms., c.l.....lb. .3002- —
l.c.l. .....lb. .3087- .3147
tanks .....lb. .2882- —
winterized, ref., tankcars, dlvd. East..lb. .29 Nom.
Spearmint, dms. .....lb. 7.00 -10.00
Sperm, bleached, 38°, dms.....lb. .2670- —
natural, 45°, dms.....lb. .25½- —
Spruce, cns., dms.....lb. 3.25 - 3.75
Sunflower-seed, imp., refined, tanks, lb. No prices
semi-refined, tanks.....lb. No prices
Sweet birch, Northern, cns.....lb. 4.50 - 5.00
Southern, cns. .....lb. 2.50 - 3.25
Oil, sandalwood, NF, Mysore, cns..lb.13.00 -22.50
Sardine, crude, tanks, Pac. coast..lb. .19 Nom.
refined, alkali, dms., l.c.l.....lb. .2390- —
kettle-bodied, dms., l.c.l.....lb. .2540- —
light-pressed, dms., l.c.l.....lb. .2240- —
tanks .....lb. .21 - —
Sassafras, artificial.....lb. .55 - 1.25
natural, Brazilian (see Oil, ocotea cymbarum).
domestic, USP XII, cns., dms.lb. 1.90 - 2.30
Savin, cns.....lb. 5.00 -13.50
Savory, cns.....lb. 5.00 - —
Seal, No. 1, tanks, U. S. ports...lb. No prices
Sesame, tanks.....lb. No prices
Shingle stain, bbls., c.l., works.gal. .2185- —
l.c.l., works .....gal. .25 - .28
tanks, works .....gal. .15 - .16
Soybean, crude, tanks, mills.....lb. .25½- —
foots, acid, 95%, tanks, dlvd. E. lb. .13 Nom.
raw, 50%, tanks, dlvd. E....lb. .06¾ Nom.
refined, alkali, dms., c.l.....lb. .3052- —
l.c.l. .....lb. .3237- .3297
tanks .....lb. .3032- —
clarified, dms., c.l.....lb. .3002- —
l.c.l. .....lb. .3087- .3147
tanks .....lb. .2882- —
winterized, ref., tankcars, dlvd. East..lb. .29 Nom.
Spearmint, dms. .....lb. 7.00 -10.00
Sperm, bleached, 38°, dms.....lb. .2670- —
natural, 45°, dms.....lb. .25½- —
Spruce, cns., dms.....lb. 3.25 - 3.75
Sunflower-seed, imp., refined, tanks, lb. No prices
semi-refined, tanks.....lb. No prices
Sweet birch, Northern, cns.....lb. 4.50 - 5.00
Southern, cns. .....lb. 2.50 - 3.25
Oil, tall, crude, tanks, works.....ton.40.00 - —
refined, dms., c.l., works.....lb. 06¾- —
l.c.l., works .....lb. 07¼- —
tanks works .....lb. 06¾- —
Tallow, acidless, dms.....lb. .22 - .22½
Tansy, cns.....lb. 9.75 -14.00
Tar pine, Comm., dms., incl., c.l., works, South..gal. .41 - 42½
l.c.l., works, South.....gal. .43 - 45½
whse., N.Y.C.....gal. 52¼- .54¾
tanks, works, South.....gal. .32 - .34½
rectified, USP, l.c.l., dms., incl., works, South..gal. .60 - —
Tar acid (see T).
Thyme, NF, red, cns.....lb. 2.00 - 3.35
white, cns. .....lb. 2.85 - 3.80
technical, white, cns.....lb .85 - 1.00
Tung, dms., c.l.....lb. .24 - —
l.c.l. .....lb. .24½- .25
tanks .....lb. .22½- —
Turkey red (see Oil, castor, sulphonated)
Turpentine, rectified, NF, cns., dms. lb. .35 - .60
Vetiver, Bourbon, cns.....lb.17.50 -28.00
Haitian .....lb.17.50 -20.00
Whale, ref., natural, dms.....lb. No stocks
Winter-bleached, dms.....lb No stocks
Wheat germ, dms .....gal.10.00 -13.50
White mineral, tech., 50 vis., non-ret. dms., c.l., San Francisco..gal. .51½- —
l.c.l., S.F. .....gal. .53½- .56½
50-65 vis., dms., c.l., N. Y....gal. .45 - —
l.c.l., N. Y.....gal. .48 - .52
65-75 vis., dms., c.l., N. Y....gal. .48 - —
l.c.l., N. Y.....gal. .51 - .55
70 vis., non-ret. dms., c.l., S.F. gal. .51½- —
l.c.l., S. F.....gal. .53½- .56½
Oil, white, mineral, USP, 80-90 vis., dms., c.l., N. Y..gal. .52 - —
l.c.l., N. Y.....gal. .55 - .59
85 vis., non-ret. dms., c.l., S. F. gal. .51½- —
l.c.l. S. F.....gal. .53½- .56½
100 vis., non-ret. dms., c.l., S. F. gal. .59 - —
l.c.l., S. F.....gal. .61 - .64
125-135 vis., dms., c.l., N. Y..gal. .64 - —
l.c.l., N. Y.....gal. .67 - .71
145 vis., non-ret. dms., c.l., S. F. gal. .68 - —
l.c.l., S. F.....gal. .70 - .74
145-155 vis., dms., c.l., N. Y..gal. .66 - —
l.c.l., N. Y.....gal. .69 - .73
175-185 vis., dms., c.l., N. Y..gal. .69 - —
l.c.l., N. Y.....gal. .72 - .76
180 vis., non-ret. dms., c.l., S. F. gal. .70 - —
l.c.l., S. F.....gal. .72 - .75
200-210 vis., dms., c.l., N. Y..gal. .73 - —
l.c.l., N. Y.....gal. .76 - .80
335-345 vis., dms., c.l., N. Y..gal. .81 - —
l.c.l., N. Y.....gal. .84 - .88
340 vis., non-ret. dms., c.l., S. F. gal. .82 - —
l.c.l., S. F.....gal. .85 - .89
Wintergreen, natural, Northern, cns. lb. 7.00 -17.25
Southern, cns.....lb. 3.65 - 6.50
synthetic (see Methyl salicylate).
Wood (see Oil, tung).
Wormseed, NF, cns.....lb. 3.75 - 5.50
Wormwood, cns. .....lb. 8.50 -13.50
Ylang-Ylang, Bourbon, extra, bots.lb. 9.50 -25.00
first, bots. .....lb. 9.75 -15.00
second, bots. .....lb. 7.00 -10.00
third, bots .....lb. 3.50 - 7.50

# THE WORLD'S FINEST ORANGE OIL

Made exclusively from oranges from the Sunkist Groves of California.

Exchange Oil of Orange gives you more *real orange flavor,* drop for drop or pound for pound, than any other orange oil.

Give it all your tests for *quality, uniformity* and *strength.* Then you'll buy Exchange Brand.

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OIL OF
ORANGE
U. S. P.

## Oleostearin—Petroleum, Fuel Oil

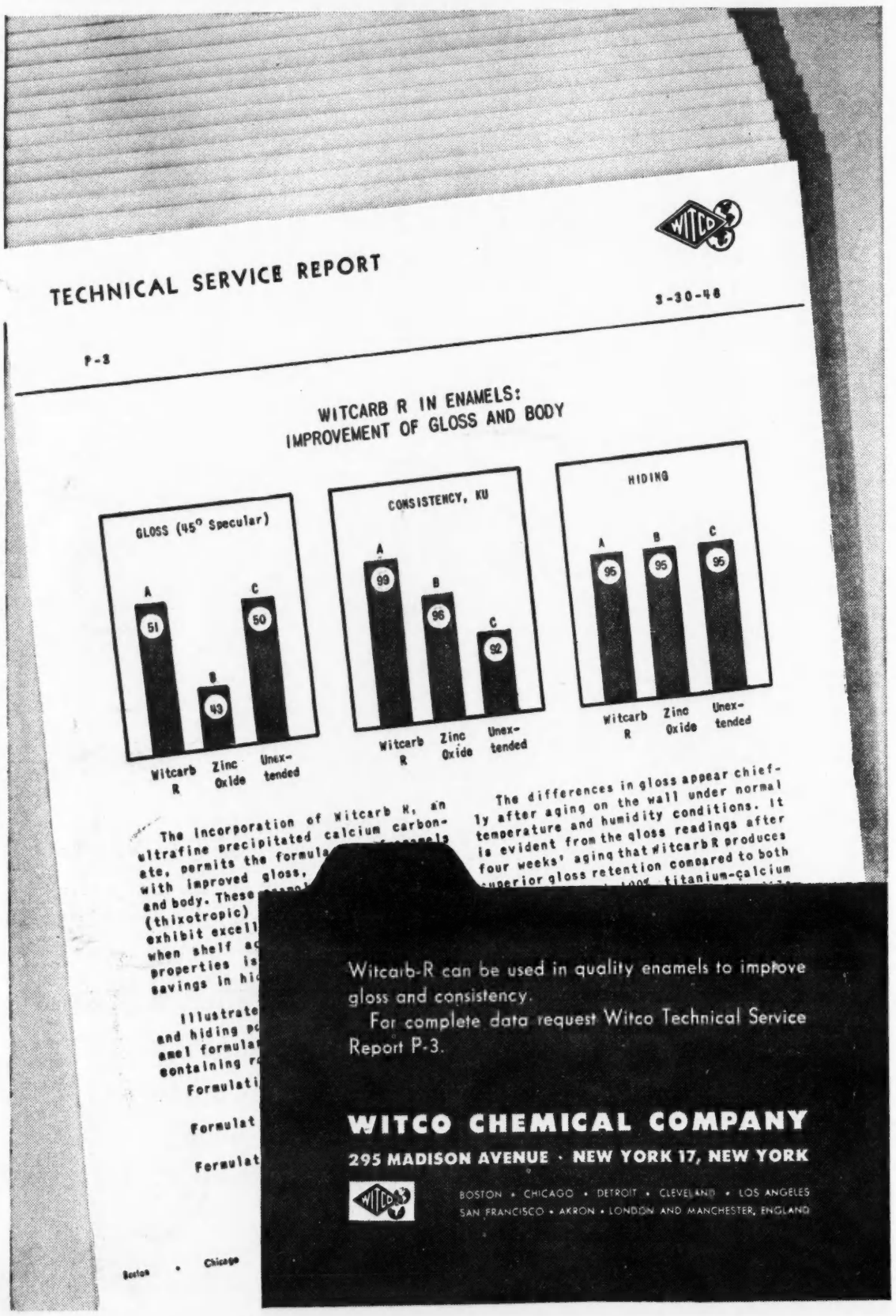
Oleostearin, tres. .....lb. .29 - —
Olivine, aggregate, c.l., mines....ton. 7.00 - 9.50
crushed, 8 mesh, bulk, c.l., works. ton.10.00 - —
paper, bgs., c.l., works.....ton.12.00 - —
lumps, bulk, c.l., works.....ton. 7.00 - —
Opium, USP, cns.....lb.19.45 - —
gran., USP, cns.....lb.21.90 - —
powd., USP, cns.....lb.21.90 - —
Orange, cadmium lithopone, bbls., frt. alld. E. of Rockies..lb. 1.00 - —
Chrome, CP, bbls., dlvd. N. of Tenn. and N. C., E. of Miss. R., includ. Davenport, Tenn. and N. C., E. of Minneapolis, Rock Island, St. Louis, St. Paul, contracts....lb. .29½- —
Chrome orange prices are ½c. higher, dlvd. Ala., Fla., Ga., La. (Shreveport); 1¼c. Miss., N. C., S. C., Tenn., Dallas and Ft. Worth, Tex.; 1½c. El Paso, Tex.; 2c. Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph; 1.0c. higher dlvd. Pac. Coast; for Denver, Pueblo, Salt Lake City, Wichita, prices are equalized with Chicago.
Dinitroanilin toner.....lb. 1.15 - —
Molybdate, bbls.....lb. .59 - —
Orthonitroanilin toner, bbls., kgs., works..lb. 1.00 - —
Persian, bbls.....lb. .30 - .45
Orange flowers, bls.....lb. .46 - .48
Orange mineral, American bbls., 5 tons, ship't point, frt. alld....lb. .20½- —
smaller lots, bbls., same basis. lb. .21 - —
Orange peel, bitter, Haitian, bls..lb. .13 - .14
Sweet, bls.....lb. .14 - .16
Oregano, Mexican, bgs.....lb. .16½- .17
Portuguese, bgs.....lb. .19 - .19½
Sicilian, bgs.....lb. .18 - .18½
Orris root, Florentine, bls.....lb. .28 - .29
powdered, bbls., bxs.....lb. .32 - .33
Verona, bls.....lb. .18 - .19
powdered, bbls., bxs.....lb. .22 - .23
Orthoaminobiphenyl dms., c.l., works. lb. .28½- —
l.c.l., same basis.....lb. .29 - —
tanks, same basis.....lb. .27 - —
Orthoamylphenol, dms., l.c.l., works. lb. .42 - —
Orthoanisidin, bbls. .....lb. .80 - —
Orthochloroanilin, dms., 10,000 lbs. or more..lb. .60 - —
smaller lots .....lb. .62 - .67
Orthochloroparanitroanilin, dms., works. lb. .81 - —
Orthochlorophenol, dms. .....lb. .28 - —
Orthocresol, pure, 30° dms., c.l., works..lb. .35 - —
l.c.l., works .....lb. .35½- —
tech., 29°-30°, dms., c.l., works...lb. .34 - —
l.c.l., works .....lb. .34½- —
26°-27°, dms, c.l., works.....lb. .26½- .28¼
l.c.l., same basis.....lb. .26¾- .28¾
tanks, same basis.....lb. .27½- —
Orthodichlorobenzene, dms., c.l., wks., frt. alld. E. of Rockies..lb. .07½- .08½
l.c.l., same basis.....lb. .09½- .10½
tanks, same basis.....lb. .07 - .08
Orthodichlorobenzene prices W. of Rockies 1c. per lb. higher.
Orthoisopropyl N-phenylcarbamate (see IPC).
Orthonitroanilin, dms .....lb. .50 - .53
Orthonitrobchlorobenzene, dms.....lb. .15 - .18
Orthonitrobiphenyl, tech., dms., c.l., works..lb. .15½- —
l.c.l., works .....lb. .16 - —
tanks, works .....lb. .14 - —
Orthonitroparachlorophenol, cns.....lb. .75 - —
Orthonitrophenol, dms.....lb. .66 - —
Orthonitrotoluene, dms.....lb. .11 - —
Orthophenetidin, dms.....lb. .90 - —
Orthotolidin, distilled, kgs.....lb. 1.00 - —
Orthotoluidin, dms. .....lb. .18 - .20
Osage orange crystals, bbls., l.c.l..lb. .33½- —
extract, liquid, bbls, l.c.l.....lb. .15½- —
Ouabaine, USP, bots.....gram. 3.00 - 4.00
Oxyquinolin sulphate, cns., 100 lbs., works..lb. 6.40 - —
smaller lots, works.....lb. 6.55 - 7.40

## P

Papain, powd., cs.....lb. 4.40 - 5.00
Papaverine, natural or synthetic, hydrochloride, N.F., cns., 1,000-oz. lots. oz. 6.60 - —
smaller lots.....oz. 6.30 - 6.50
Sulphate, cns.....oz. 7.10 - 7.35
Paprika, Chilean, bgs.....lb. .27 - .28
Portuguese, bgs.....lb. .35 - .36
Spanish, bgs. .....lb. .40½- .43½
Para-anisidin, dms., works.....lb. .75 - —
Parachlorophenol, dms., c.l., works..lb. .27 - —
l.c.l., works .....lb. .28 - .38
Parachloroanilin, dms., frt. alld. E. Miss..lb. .70 - —
Parachloro-orthonitroanilin, dms....lb. No stocks
Paracresol, 98%, dms., works.....lb. .45 - —
Paracymene, dms., c.l., works.....lb. .1595- —
l.c.l., works.....lb. .1645- —
tanks, works.....lb. .1545- —
Paradibromobenzene, bgs., 500-lb. lots, works..lb. .45 - —
Paradichlorobenzene, dms., c.l., works. lb. .12½- .13½
l.c.l., same basis.....lb. .14 - .15½
Paraffin, crude, scale, white or yellow, 119-121 ASTM, bbls., c.l., refinery..lb. 0725- —
121-123 ASTM, bbls., c.l., ref'y. lb. 0725- —
126-128 ASTM, bbls., c.l., ref'y. lb. 0775- —
fully ref'd, slabs, 122-124 ASTM, loose, c.l., ref'y..lb. 0750- —
125-127 ASTM, loose, c.l., ref'y.lb. 0780- —
128-130 ASTM, loose, c.l., ref'y.lb. 0805- —
130-132 ASTM, loose, c.l., ref'y.lb. 0820- —
132-134 ASTM, loose, c.l., ref'y.lb. 0845- —
135-137 ASTM, loose, c.l., ref'y.lb. 0910- —
Paraffin prices in bgs., ¾c. per lb. higher; in ctns., 4/5c. per lb. higher; 1,000 to 9,999 lbs. in ctns., 2.80c. per lb. higher, and under 1,000 lbs. in ctns., 3.80c. per lb. higher
Paraformaldehyde, dms., 1,000 lbs., works..lb. 24 - —
smaller lots, works.....lb. 25 - —
Paraldehyde, tech., 98%, 55 gals., dms., l.c.l., works..lb. 12½- .13½
5-10-gal. dms., l.c.l., works...lb. .16½- —
tanks, works.....lb 11 - —
USP, cbys.....lb 37 - 40
Paranitroanilin, kgs., works..... lb. 43 - —
Paranitrochlorobenzene, kgs., works lb. 18 - —
Paranitrophenol, kgs., works, frt. equald. lb. 40 - —
Paranitrotoluene, kgs., works..... lb. 36½- —
Paraphenylphenol, bgs., works.....lb 27 - 28
Paraphenylenediamine, tech., kgs., works...lb. 1.30 - .
Paratertiarybutylphenol, kgs., works, lb. 19 - .20
Paratoluenesulphonamide, bbls., works. lb. 70 - —
Paratoluidin, bbls., works.....lb. .55 - .58
Paris green, dealer, distributor, dms., kgs., c.l., works, frt. alld E. lb 31 - —
l.c.l. same basis .....lb 32 - 33
Passion flower herb, bls.....lb. .30 - .35
Patchouli leaves, bls.....lb. .45 - .50
Pectin, citrous, bbls..... lb 1.25 - —
Penicillin G, amorph., calcium, bulk, 1,000,000,000-unit lots..... 100,000 units. .13 - .14
sodium, wholesalers, bots. (100,000 units)..bot. .24 - .25
cryst., sodium, wholesalers (100,000 units)..bot. .24 - .25
(200,000 units).....bot. .432 - —
bulk, 1,000,000,000-unit lots..... 100,000 units. .14½- .16½
procaine, cryst., bulk, 100,000,000-unit lots..100,000 units. .17 - —
in oil, 10 c.c. bots. of 300,000 units, wholesalers..bot. 8.00 -10.00
Pennyroyal leaves, bls.....lb 25 - 30
Pentachlorophenol, dms., works....lb. 20 - 25
Pentaerythritol, tech., bbls., c.l., works..lb. 32 - —
l.c.l., works..... lb 34 - 36
Pentane, industrial, tanks, group 3,gal. 10½- .11½
Pepper, black, bgs.....lb. .52 - .52½
futures, bgs., nearby.....lb. .52 - .52½
distant .....lb. .52½- .56
Red, capsicum, Louisiana longs, bgs., shipment point..lb 18 Nom
Mombasa, bgs..... lb No stocks
Niger, bgs. .....lb. .25 - .25½
birdseye, bgs. .....lb. .30 - .30½
Sierra Leone, futures.....lb. 23 Nom.
Chillies, Haitian, bgs..... lb No stocks
Mexican, long .....lb No stocks
White, bgs. .....lb. 69 - .70
Peppermint, USP, dom., bls..... lb 75 - 80
Imported bls.....lb. .75 - 80
Perchloroethylene, dms., c.l., zone 1, works, frt. alld. lb. 10¾- —
zone 2, same basis..... lb. .11¼- —
zone 3, same basis.....lb. .11¾- —
zone 4, same basis.....lb. .11¾- —
l.c.l., zone 1, same basis.....lb. .11½- —
zone 2, same basis.....lb. .12 - —
zone 3, same basis.....lb .12½- —
zone 4, same basis..... lb .12 - —
Perchloroethylene, tanks, zone 1, same basis..lb. .10¼- —
zone 2, same basis..... lb. 10¾- —
zone 3, same basis.....lb. 11¼- —
zone 4, same basis.....lb. .10¾- —

Perchloroethylene zones are:—(1) Conn., Del., Ill., Ind., Ia., Ky., Me., Md., Mass., Mich., Minn., Mo., Neb. (Omaha), Kans. (Kansas City), N. J., N. Y., N. C., Ohio, Pa., R. I., Tenn., Vt., Va., W. Va., Wis.; (2) Ala., Ark., Fla., Ga., Kansas, La., Miss., Neb., N. D., Okla., S. C., S. D.; (3) Col., Mont. (E) N. M., Tex., Wyo.; (4) Ariz., Cal., Idaho, Mont. (W), Nev., Ore., Utah, Wash

Peru balsam, dms.....lb. $0 - $1
Petrolatum, tech., dark, bbls., c.l., group 3 lb. 021 - —
f.o.b. Indiana refy.....lb. .01¾- —
golden topaz, bbls., c.l.....lb. 032 - —
l.c.l. .....lb. 036 - —
red, veterinary, bbls., c.l.....lb. 024 - —
l.c.l. .....lb. 028 - —
USP, amber, non-ret. dms., c.l.lb. 04¾- —
Pennsylvania refy.....lb. .04¾- —
l.c.l. .....lb. 05¾- —
California refy.....lb. .08¾- —
cream, c.l., dms.....lb. .06¾- —
l.c.l. .....lb. 08¾- —
extra, amber, dms., c.l.....lb. .05 - —
Pennsylvania refy.....lb. .04¾- —
l.c.l. .....lb. .06¾- —
white, lily, dms., c.l.....lb. 06¾- —
l.c.l. .....lb. .08¾- —
USP, snow, dms., c.l.....lb. .07¾- —
Pennsylvania refy.....lb. .07¾- —
l.c.l. .....lb. 09¾- —
California refy.....lb. .12 - —
soft, dms., c.l.....lb. 06¾- —
Pennsylvania refy.....lb. .06¾- —
l.c.l. .....lb. .07¾- —
California refy.....lb. .10¾- —
Petrolatum, USP, yellow, soft, dms., c.l..lb. .04¾- —
Pennsylvania refy.....lb. .04¾- —
l.c.l. .....lb. .06 - —
California refy.....lb. .08¾- —
Petroleum, crude, bulk, at wells, California..bbl. 1.94 - 2.88
Illinois .....bbl. 2.65 - 2.77
Kentucky .....bbl. 2.60 - 2.77
Louisiana-Arkansas .....bbl. 2.14 - 2.75
Montana .....bbl. 2.50 - 2.65
Oklahoma-Kansas .....bbl. 2.23 - 2.65
Pennsylvania, lower field...bbl. 5.00 - —
Upper field.....bbl. 3.10 - 5.00
Texas, East.....bbl. 2.65 - —
Gulf coast.....bbl. 2.38 - 2.95
North, North-Central.....bbl. 2.23 - 2.65
Panhandle .....bbl. 2.23 - 2.65
West .....bbl. 2.10 - 2.52
Wyoming .....bbl. 1.90 - 2.65
Ether, laboratory, 30°-60° C, cns., dlvd. E..gal. 1.50 - —
dms., c.l., group 3.....gal. .26 - —
l.c.l., same basis.....gal. .44 - —
35°-60° C, 10-gal. cns., dlvd. E..gal. 1.50 - —
dms., c.l., Group 3.....gal. .26 - —
l.c.l., same basis.....gal. .44 - —
40°-75° C, 10-gal. cns., dlvd. E..gal. 1.50 - —
dms., c.l., Group 3.....gal. .26 - —
l.c.l., same basis.....gal. .44 - —
90°-100° C, ret. dms., ex-tax, f.o.b. San Francisco..gal. .37 - —
Fuel oil, bunker C (No. 6), California, heavy tanks, refinery..bbl. 2.10 - 2.20
light, tanks, refinery.....bbl. 2.35 - 2.40
Eastern, tanks, Albany, N.Y..bbl. 3.249 - —
Baltimore, Md. .....bbl. 3.03 - 3.17
Boston, Mass. .....bbl. 3.055 - 3.315
Charleston, S. C. .....bbl. 2.96 - —

Petroleum, fuel oil, bunker C (No. 6), eastern refinery, Jacksonville, Fla..bbl. 2.99 - 3.03
New York, N. Y. .....bbl. 3.03 - 3.27
Norfolk, Va. .....bbl. 3.00 - 3.04
Philadelphia, Pa. .....bbl. 3.03 - 3.17
Portland, Me. .....bbl. 3.095 - 3.115
Providence, R. I. .....bbl 3.045 - 3.085
Savannah, Ga. .....bbl. 2.99 - 3.03
Diesel, tanks, refinery, California, gal. 0785- 096
Pennsylvania ..... gal 11 - 125
Furnace, tanks, refinery, Arkansas, No. 2..gal 09125- —
No. 3 .....gal. 08875- —
Bayonne, N. J., No. 2.....gal. 094 - —
Group 3, No. 1.....gal. 09125- 09625
No. 1, straw.....gal. 08875- —
No. 2, straw.....gal. 09 - 10
No 3 .....gal. 09125- —
range .....gal. 09375- 0975
Pennsylvania, No. 1.....gal. .1125- 13
No. 2.....gal. .11 - 13
No. 3.....gal 11 - 125
Lacquer diluent, California, 170-255 F. b.r., tanks, ex-tax, f.o.b. Los Angeles..gal. .147 - —
Portland, Ore. .....gal. .158 - —
San Francisco .....gal. .152 - —
Seattle, Wash. .....gal. .158 - —
East coast, tanks, N. J. and N. Y. refinery..gal. .16 - —
Hexane-type, tanks, Bayonne, N.J. gal 16 - —
Group 3, benzol-type, tanks, refinery..gal. .1225- 13
toluol-type, tanks, refinery..gal .1225- 13
Mineral spirits, California, 170-255 b.r., tanks, ex-tax, f.o.b. San Francisco..gal. .152 - —
205-265 b.r., tanks, same basis..gal. .152 - —
245-309 b.r., tanks, same basis..gal. .152 - —
305-392 b.r., tanks, same basis..gal. .142 - —
312-409 b.r., tanks, same basis..gal. .142 - —
300-455 b.r., tanks, same basis..gal. .152 - —
East coast, tanks, N. J., N. Y., refinery..gal. 14 - —
Group 3, tanks .....gal. .1025- 115
Gulf coast, tanks, refinery... gal. 0875- —
tankwagon, Baltimore .....gal. 175 - —
Boston .....gal. 16 - —
Buffalo .....gal. 165 - —
Camden, N. J. .....gal. 15 - —
Chicago .....gal. 191 - —
Detroit .....gal. 211 - —
Kansas City, Mo. .....gal. 182 - —
Lancaster, Pa. .....gal. 16 - —
Newark .....gal. 15 - —
New York .....gal. 15 - —
Philadelphia .....gal. 15 - —
Pittsburgh .....gal. 175 - —
Providence .....gal. 165 - —
Rochester .....gal. 175 - —
St. Louis .....gal. 180 - —
Syracuse .....gal. 185 - —
Washington, D. C. .....gal. 175 - —
Naphtha, cleaners, California, tanks, San Francisco..gal. .122 - —
East coast, tanks, N. J., N. Y., refinery..gal. 14 - —
Group 3, tanks.....gal. .10625- 12
tankwagons, St. Louis.....gal. 1470- —
tankwagon, Newark .....gal. 15 - —
Chicago .....gal. 1475- —
Detroit .....gal. 1575- —
New York .....gal. 15 - —
Philadelphia .....gal. 15 - —
high-flash, 140° F, group 3, refinery, tanks..gal. .13 - .145
high-solvency, tanks, refinery, 280-285 b.r., 37-38° C, mixed anilin pt..gal. 22 - —
25-26° C. m.a.p.....gal. 21 - 2614
270-370 b.r., 78-81° C, m.a.p. gal. 2414- 26
49° C, m.a.p.....gal. 29 - —
26° C, m.a.p.....gal. 21 - 26
300-400 b.r., 26-32° C, m.a.p. gal. 21 - 2614
340-410 b.r., 32° C, m.a.p..gal. 21 - —
36° C, m.a.p.....gal. 21 - 2814
340-440 b.r., 225 C, m.a.p..gal. 2514- —
360-480 b.r., 25° C, m.a.p..gal. 21 - —
V.M.&P., California, 245-360 b.r., tanks, ex-tax, f.o.b. Los Angeles..gal. .147 - —
Portland, Ore. .....gal. .158 - —
San Francisco .....gal. .152 - —
Seattle, Wash. .....gal. .158 - —
205-290 b.r., tanks, ex-tax, f.o.b. Los Angeles..gal. .147 - —
Portland, Ore. .....gal. .158 - —
San Francisco .....gal. .152 - —
Seattle, Wash. .....gal. .158 - —
East coast, N. J., N. Y., tanks.. gal. .15 - —
Group 3, tanks.....gal. .1125- 12
Gulf coast, tanks, New Orleans, gal. .10 - —
tankwagon, Boston.....gal. .175 - —
Chicago .....gal. .204 - —
Detroit .....gal. .221 - —
Milwaukee .....gal. .207 - —
Minneapolis .....gal. .205 - —
Newark .....gal. .165 - —
New York.....gal. .165 - .17
Philadelphia .....gal. .165 - —
Pittsburgh .....gal. .185 - —
St. Louis .....gal. .190 - —
Solvent, rubber, California, tanks, ex-tax, San Francisco..gal. .152 - —
East coast, N. J., N. Y.. gal. .15 - —
Group 3 tanks.....gal. .11 - .1175
Stoddard (CS 8-53), California, tanks, ex-tax, San Francisco. gal. .142 - —
East coast, N. J., N. Y., tanks..gal. .14 - —
Group 3, tanks.....gal. .11 - .1175
Pennsylvania, western, tanks, gal. .10 - —
tankwagon, Boston .....gal. .16 - —
Chicago .....gal. .1514- —
Detroit .....gal. .1714- —
Milwaukee .....gal. .1614- —
Minneapolis .....gal. .1614 - —
Newark .....gal. .15 - —
New York .....gal. .15 - —
Philadelphia .....gal. .15 - —
Pittsburgh .....gal. .15 - —
St. Louis.....gal. .17 - —
Syracuse .....gal. .17 - —
Sulphonate, 70% sulphonic content, ret. dms., c.l., works..lb. .1514- —
lb. .1514- —
l.c.l., works .....lb. .1514- —
tanks, works .....lb. .1334- —
60% sulphonic content, ret. dms., c.l., works. lb. .1214- —
l.c.l., works .....lb. .1214- —
tanks, works .....lb. .1014- —
Phenobarbital, dms., 100 lbs.....lb. 4.00 - 4.35
Phenol, 90-92% (cresol, 8-10%), dms., c.l., works, frt. equald..lb. .1314- .14
l.c.l., same basis.....lb. .1414- .1434
tanks, same basis.....lb. .1214- .13
82-84% (cresol, 16-18%), dms., c.l., same basis..lb. .1414- .1434
l.c.l., same basis.....lb. .15 - .1534
tanks, same basis.....lb. .1314- .1334
USP, dms., c.l., same basis.....lb. .13 - .1334
l.c.l., same basis.....lb. .1334- .14
tanks, same basis.....lb. .1134- .12

Phenolphthalein, USP, yellow, bbls., dms., 2,000 lbs..lb. .92 - —
smaller lots.....lb. .93 - .98
Phenothiazin, NF, fib. dms., ton lots, works..lb. .49 - —
smaller lots, works.....lb. 54 - —
Phenylacetaldehyde solution, 50%, bots. lb. 2.35 - 2.75
pure, bots.....lb. 4.00 - 4.50
Phenyl acetate, dms., 100-lb. lots, works..lb. .50 - —
Phenyldiethanolamine, dms., c.l., wks. lb. .3414- —
l.c.l., works.....lb. .35 - —
Phenylethanolamine, dms., c.l., works, lb. .6414- —
l.c.l., same basis.....lb. 65 - —
Phenylethyl acetate, dms.....lb. 1.75 - 2.70
Phenylethylphenyl acetate, bots....lb. 4.50 - 6.00
Phenylhydrazin base, CP, bots.....lb. 3.00 - 3.07
Hydrochloride, CP, bots., works..lb. 5.00 - 5.07
commercial, kgs., works.....lb. 1.75 - —
Phenylmethylpyrazolone, dms., works, lb. 1.53 - 1.60
Phloroglucinol, CP, fib. dms.....lb. 13.75 - —
tech., fib. dms.....lb. 10 00 - —
Phosgene, 150-lb. cyls., works.....lb. 2614- 27
10-lb. cyls., works.....lb. 1.50 - —
Phosphate, defluorinated (see under D.).
Phosphate rock, Florida, land pebble, run-of-mine, washed, dried, unground, 68-66%, b.p.l., bulk, c.l., car at mine..long ton. 4.61 - —
70%-68%, b.p.l., c.l., same basis..long ton. 5.01 - —
72%-70%, b.p.l., c.l., same basis..long ton. 5.31 - 5.61
75%-74%, b.p.l., same basis, long ton. 6.31 - 6.51
77%-76%, b.p.l., c.l., same basis..long ton. 7.31 - —

Phosphate rock, Florida, land pebble, 65.5% b.p.l., basis 30% $P_2O_5$ minimum..short ton. 5.78 - —
68%, b.p.l, basis 31% $P_2O_5$ minimum..short ton. 5.98 - —
70%, b.p.l., basis 32% $P_2O_5$ minimum..short ton. 6.93 - —
Prices for Florida phosphate rock are plus usual bonus penalty clause on oil and labor. Prices on entirely pebble, 50c. per long ton higher than above quotations.
Tennessee, brown, run-of-mine, unground, 27-29% $P_2O_5$..long ton 6.00 - —
30-32% $P_2O_5$.....long ton. 6.75 - —
Phosphorus, red, amorphous, cs.....lb. .33 - .36
tins, export .....lb. 40 - 45
Yellow, cns .....lb. .30 - .37
dms., c.l. .....lb. .26 - —
Oxychloride, dms., works.....lb. .11 - .14
Pentoxide, dms c.l., works.....lb. .12 - —
l.c.l., works .....lb. .13 - .14
Sesquisulphide, tins, cs., works...lb. .28 - .29
Trichloride, dms., c.l., works.....lb. .11 - .14
l.c.l., works .....lb. 12 - .15
Phthalanilide, bbls., works.....lb. .35 - .40
kgs., works .....lb. 45 - .50
Phthalic anhydride, bgs., bbls., c.l., works, frt. equald..lb. .1914- .2114
Pacific Coast, dlvd.....lb. .2114- —
l.c.l., same basis.....lb. .2014- .2214
Pacific Coast, dlvd.....lb. .2314- —
Pichi leaves, bgs.....lb. 07 - .08
Picoline (see Alphapicoline and Betapicoline).
Picrotoxin, bots .....oz. 8.00 - —
Pilocarpine hydrochloride, USP, bots., vials, cz. 6.50 - 7.80
Nitrate, bots. vials.....oz. 6.25 - 7.25
Pimento, Jamaica, bgs.....lb. .2314- .24

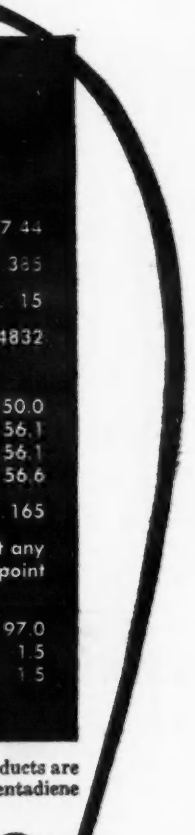
## Petroleum, Fuel Oil—Poppy Seed

Pinetar, retort, dms. incl., c.l., works, South..gal. .4214- —
l.c.l., same basis.....gal. .4514- —
whse., N.Y.C.....gal. .5414- —
tanks, works, South.....gal. .3414- —
Pinkroot, bls.....lb. 2.25 - 2.50
Piperidine, 95%, dms., frt. equald..lb. 1.65 - —
98%, same basis.....lb. 1.75 - —
Piperazine hexahydrate, bots.....lb. 8.50 - 9.00
Pipsissewa herb (see Prince's pine).
Pitch, coaltar, 150° m.p., bbls., c.l., works..ton 31.00 - —
l.c.l., works .....ton 34.00 - —
Cottonseed, dms., works.....lb. 1014- .1034
Hardwood, paper tgs., works....lb. 04 - —
Linseed, dms.....lb. No prices
Petroleum (see Asphaltum, Mexican, Texas)
Pine, dms. ex whse. East...100 lbs. 6.90 - —
Soybean, dms., works.....lb. 1014- .1034
Plaster of paris (see Gypsum).
Platinum metal, works.....oz. 98.00 - 101.00
Podophyllin, dms.....lb. 11 75 - 13.50
Pokeroot, bls. .....lb. .18 - .19
Polystyrene, plain colors, bgs., 30,000 lbs., works, frt. alld..lb. 33 - —
20,000 lbs., same basis.....lb. 34 - —
smaller lots, same basis....lb. 35 - .43
water-clear, bgs., 30,000 lbs., works, frt. alld..lb. 27 - —
20,000 lbs., same basis.....lb. 28 - —
smaller lots, same basis.....lb. 29 - 38
Plain color polystyrene prices in dms., ½c. per lb. higher.
Pomegranate root bark, bgs.....lb. 75 - .76
Poppy flowers, bls.....lb. 65 - .70
Seed, Danish, bgs., futures.....lb. .2414- .25
Dutch, bgs. .....lb. .22 - .2214
Turkish, bgs. .....lb. .1514- .16
futures, bgs. .....lb. .14 - .1414


From SHELL CHEMICAL ... a downward price revision for

# Trichloropropane

AN EFFICIENT SOLVENT FOR OILS AND RESINS




TYPICAL PROPERTIES

| | |
|---|---|
| Molecular Weight | 147.44 |
| Specific Gravity, 20/20° C | 1.385 |
| Color, Pt-Co | 15 |
| Refractive Index, $n_D^{20}$ | 1.4832 |
| Distillation Range, °C | |
| IBP | 150.0 |
| 90% | 156.1 |
| 95% | 156.1 |
| DP | 156.6 |
| Flash Point, °F | 165 |
| Fire Point, °F | Will not ignite at any temperature up to boiling point |
| Analysis, %w | |
| Trichloropropane | 97.0 |
| Epichlorohydrin | 1.5 |
| Glycerol Dichlorohydrin | 1.5 |

New volume production now allows Shell Chemical to offer 1,2,3-Trichloropropane at a greatly reduced price.

Trichloropropane has the rapid and powerful solvent action typical of chlorinated hydrocarbons. Its excellent solvency and low evaporation rate suggest its use in paint and varnish removers and engine cleaning compounds.

High solvency is also provided for oils, fats, waxes, chlorinated rubber and many natural and synthetic resins.

*In addition, because of its low vapor pressure at moderate temperatures, TCP is well suited to applications where volatile solvents are undesirable.*

The high efficiency of this product plus its new low price might very well mean an attractive saving in the manufacture of *your* product.

Why not write today for a data sheet and a sample?

Among the many other Shell Chemical products are Acrolein, Hexylene Glycol and Methylpentadiene

NOW AVAILABLE IN COMMERCIAL QUANTITIES

SHELL CHEMICAL CORPORATION

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## Potash Caustic—Quinolin

**Potash**, caustic, low-chloride, flake, 90%, dms., c.l., works..100 lbs. 9.60 - —
l.c.l., works.....100 lbs. 10.35 - —
liquid, dms., c.l., works..100 lbs. 9.00 - —
l.c.l., works.....100 lbs. 9.75 - —
tanks, works.....100 lbs. 8.25 - —
solid, 90%, dms., c.l., works.....
100 lbs. 9.00 - —
l.c.l., works.....100 lbs. 9.75 - —
regular, flake, 88-92%, dms., c.l., works. lb. .0785- —
l.c.l., works.....lb. .0860- —
liquid, 45% basis, dms., c.l., works..lb. .03575- —
l.c.l., same basis.....lb. .0395- —
tanks, same basis.....lb. .03¼- —
solid, 88-92%, dms., c.l., works.lb. .07¼- —
l.c.l. .....lb. .08 - —
**Potassium** abietate.....lb. .08 - —
Acetate, USP, dms.....lb. .28 - .30
Bicarbonate, USP, gran., dms.....lb. .20 - .22
powd., dms.....lb. .22 - .24
Bichromate, bgs., c.l., works.....lb. .12¼- —
l.c.l. .....lb. .12½- .12½
Potash bichromate in bbls., ¼c. higher.
Borate, gran., bbls., c.l., works..ton.200.00 - —
ton lots, works.....ton.218.50 - —
less ton lots, works.....ton.223.50 - —
Bromate, bbls., 1,000 lbs. or more, lb. .48 - —
25-200 lbs. .....lb. .50 - —
Bromide, USP, cryst., gran., bbls., kgs..lb. .33 - .34
Carbonate, tech., calcined, bbls., c.l., works..lb. .07½- —
l.c.l., same basis.....lb. .08 - —
hydrated, 85-85%, bbls., c.l., works..lb. .06 - —
dms., l.c.l., works.....lb. .06½- —

Potassium carbonate, USP, gran., bbls., dms..lb. .16 - .18
powd., bbls., dms.....lb. .21 - .23
Chromate, tech., bgs.....lb. .25 - .29
Chlorate, cryst., kgs., c.l., works. lb. .08½- —
l.c.l., works.....lb. .09¾- —
powd., dms., kgs., c.l., works..lb. .09 - —
l.c.l., works.....lb. .09¾- —
export, kgs., 1 to 10 tons, ex whse..lb. .12 - —
Chloride, USP, cryst., bbls.....lb. .26 - .27
gran., bbls .....lb. .20 - .22
powd., bbls.....lb. .29 - .32
Citrate, USP, gran., bbls., dms...lb. .35½- .40½
Potash citrate, USP, powd., 3c. per lb. higher.
Cyanide, dms., works.....lb. .55 - —
Fluoride, dms., works.....lb. .24 - —
Glycerophosphate, 75% solution, cbys. lb. 2.05 - 2.20
Guaiacol sulphonate, NF, dms...lb. 1.80 - 1.85
Hydroxide, tech. (see Potash, caustic).
USP, sticks, cns.....lb. .34 - .36
Hypophosphite, cns.....lb. .72 - .75
Iodide, dms.....lb. 1.05 - 1.18
Manure salt, 22% $K_2O$, bulk, mines.. unit-ton. .20 - —
25% $K_2O$, bulk, mines..unit-ton. .21 - —
Metabisulphite, gran., bbls.....lb. .19 - .21
powd., bbls.....lb. .25 - —
Muriate, dom., 60% $K_2O$, bulk, Carlsbad, N. M..unit ton. .37½- —
Trona, Cal. .....unit-ton. .45½- —
Nitrate (see Saltpeter).
Oxalate, neutral, tech., fine gran., bbls., dms..lb. .28 - .34

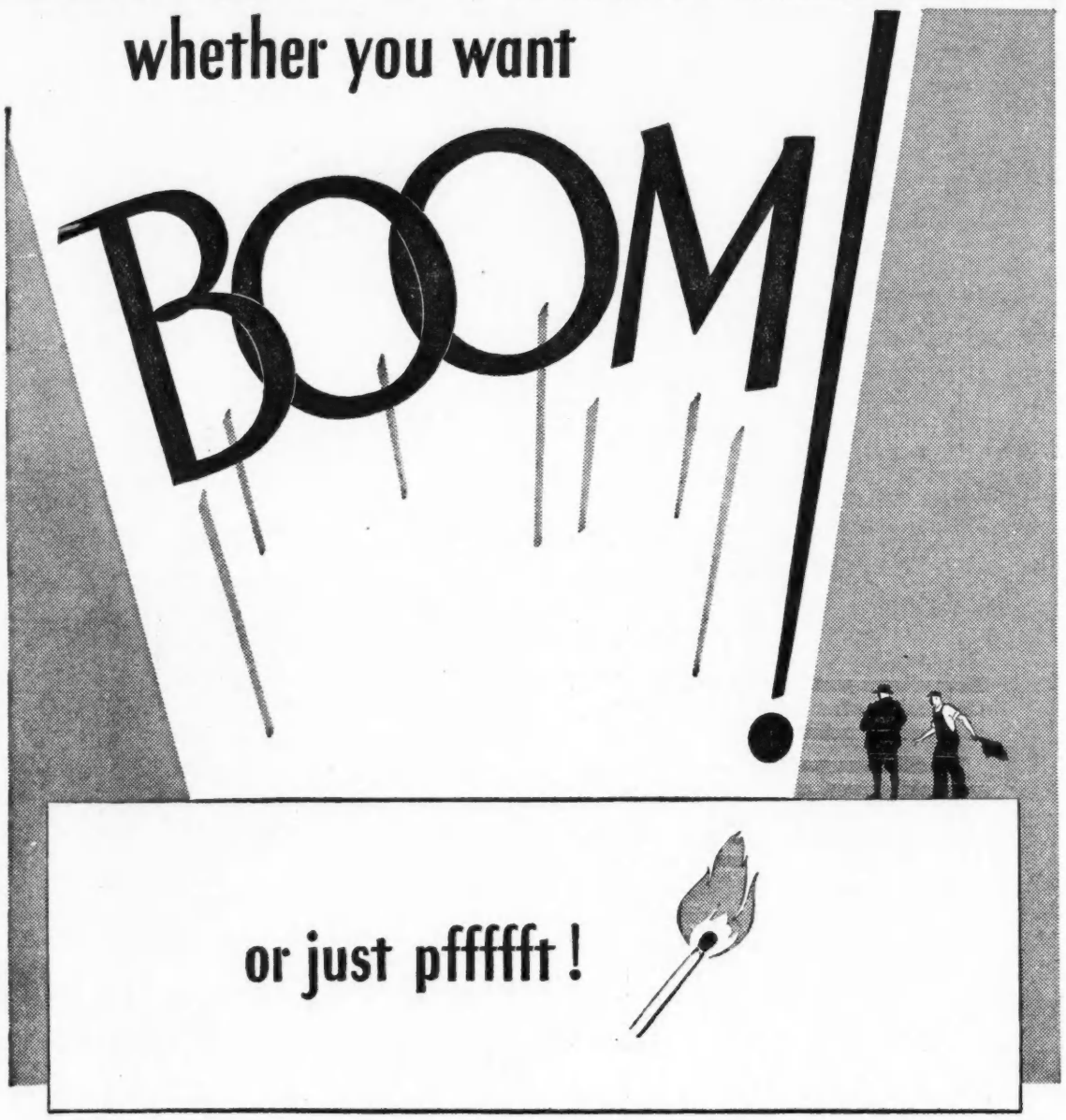
Potassium perchlorate, kgs., works.lb. .12½- .14
Permanganate, tech., kegs, works. lb. .21¾- .22¼
USP, dms., works.....lb. .23½- .24
Persulphate, dms., c.l., works.....lb. .17 - —
l.c.l., works.....lb. .21 - —
Phosphate, tetrabasic, bbls., works. lb. .13 - .13¾
Prussiate, red, kgs.....lb. .55 - .58
Yellow, bbls.....lb. .19 - —
Ricinoleate, tech., bbls.....lb. .18 - —
Silicate, glass, bgs., c.l., works..ton.200.00 - —
l.c.l. .....100 lbs. 15.25 - —
solution, 29° Be. ret. drums, c.l., works..100 lbs. 4.25 - —
l.c.l., 5 or more, works..100 lbs. 5.00 - —
1-4, works.....100 lbs. 5.50 - —
32° Be, ret. dms., c.l., works..... 100 lbs. 4.75 - —
l.c.l., 5 or more, works. 100 lbs. 5.50 - —
1-4, works.....100 lbs. 6.00 - —
40.5° Be, ret. dms., c.l., works. 100 lbs 5.75 - —
l.c.l., 5 or more, works. 100 lbs. 6.50 - —
1-4, works.....100 lbs 7.00 - —
Silicofluoride, bbls., works.....lb. .09 - —
Sulphate, NF, cryst., bbls.....lb. .31 - .33
powd., bbls.....lb. .14¼- .15
tech., dom., bulk, basis 90-95% $K_2O_4$ min. 90%, works..ton.32.50 - —
Sulphocyanide, cryst., NF., dms..lb. .70 - .78
Thiocyanate (see sulphocyanide).
Titanate, ctns., c.l., works.....lb. .12 - —
5 tons, works.....lb. .12½- —
2,000 lbs. or less, works.....lb. .12½- .13
Xanthate, dms., c.l.....lb. .12 - —

Potassium-magnesium sulphate, bulk, min., 40% $K_2SO_4$, 18-50% MgO, works..ton.14.50 - —
Potassium-sodium ferricyanide, kgs., works..lb. .45 - .48
Potassium-sodium tartrate (see Rochelle salt).
Potassium - titanium oxalate, bbls., dms..lb. .50 - .55
Prickly ash bark, bls.....lb. .28 - .33
Berries, bgs.....lb. .20 Nom.
Prince's pine herb, bls.....lb. .55 - .60
Procaine hydrochloride, cns., 200-lb. lots..lb. 4.75 - —
smaller lots .....lb. 5.00 - 5.75
Propane, commercial grade, tanks, group 3..gal. .057 - —
Propionaldehyde, dms., c.l., works..lb. .16½- —
l.c.l., works .....lb. .17 - —
tanks, works .....lb. .15 - —
Propyl aldehyde (see Propionaldehyde).
Propyl acetate, dms., c.l., works....lb. .19½- —
l.c.l., works.....lb. .20½- —
tanks, works.....lb. .18 - —
tankwagons, works.....lb. .18½- —
Propylene dichloride, dms., c.l.....lb. .08½- —
l.c.l. .....lb. .09½- —
smaller containers.....lb. .12½- —
tanks .....lb. .07 - —
Oxide, dms., c.l., frt alld. E.....lb. .20½- —
l.l., frt alld. E.....lb. .21½- —
tanks, frt. equald.....lb. .18½- —
Propyleneglycol, N.F., dms., c.l., frt. alld. E..lb. .17 - —
l.c.l., same basis.....lb. .18 - —
tanks, same basis.....lb. .15½- —
Propylthiouracil, bots. works.....kilo 5.00 - —
Psyllium seed (see Fleaseed).
Pulsatilla herb, bls. .....lb. .60 - .65
Pumice, dom., grd., course, 0, 1, 1½, 2, 3, bgs., ton lots..lb. .03½- .04
Chicago .....lb. .04½- —
smaller lots.....lb. .03½- .04¼
fine, bgs., ton lots.....lb. .03½- —
smaller lots .....lb. .03½- .04
Italian, silk-screen, fine, bgs., ton lots..lb. .04 - —
coarse, bgs., ton.....lb. .05½- —
sun dried, fine, bgs., ton lots...lb. .03 - —
coarse, bgs., ton lots.....lb. .04¼- —
Pumice in bbls. is ½c. per lb. higher.
Pumpkin seed bgs. .....lb. .27 - .29
Purple lake (see Red)
Pyrethrum concentrate, dewaxed, 20%; for aerosol bombs, dms., works.lb. 7.00 - 7.25
liquid (20 to 1), basis 2 grams pyrethrins per 100cc., odorless base, dms., works..gal. 5.50 - —
regular base, dms., works..gal. 5.40 - —
(30 to 1), base 3 grams pyrethrins, per 100cc, odorless base, bbls., works..gal. 8.15 - —
regular base, dms., works.gal. 8.10 - —
Flowers, fine-grd., 0.9% pyrethrins, bbls., works..lb. .24½- .28
powder, 1.3% pyrethrins, bbls., works. lb. .35½- .42
Pyridin, denaturing, ret. dms., works frt. equald. gal 2.49 - 2.52
refd., 2° non-ret. dms., c.l., same basis. lb. .69 - .70
l.c.l., same basis..... lb. .69½- .70½
ret. dms., l.c.l., same basis....lb. .69 - .80
Pyridoxin hydrochloride, 100-gram lots. gram. .55 - —
Pyrites, Spanish, c.i.f. Atl. ports, long-ton. 8.00 - —
Pyrocatchin (see Catechol).
Pyrophyllite, standard, 200 mesh, bulk, c.l., mines..ton.11.00 11.50
250 mesh, bulk, c.l., mines..ton.12.00 - —
325 mesh, bulk, c.l., mines....ton 14.00 - —
No. 3, 200 mesh, bulk, c.l., mines, ton 9.50 - —
insecticide grade, 200 mesh, bulk, c.l., mines..ton. 9.00 -10.00
rubber grade, 140 mesh, bulk, c.l., mines..ton. 7.00 - —
Pyrophyllite in paper bgs., $3 to $3.50 per ton extra.

Pyroxylin scrap, opaque, amber, cs., works. lb. .17 - —
black, cs., works.....lb. .14 - —
gray, cs., works.....lb. .14 - —
mixed, mottled, cs., works...lb. .12 - —
white, china, ivory, cs., works. lb. .17 - —
dense, cs., works.....lb. .17 - —
translucent, pastels, cs., works.lb. .17 - —
transparent, colorless, cs., works. lb. .19 - —
colors, cs., works.....lb. .17 - —
shavings, opaque, amber, cs., works. lb. .15 - —
mixed colors, cs., works.....lb. .14 - —
white, cs., works.....lb. .17 - —

## Q

Quassia chips, bls.....lb. .07 .09
Quebracho extract, clarified, grd., 70% tannin, bgs., c.l..lb. .17½- —
liq., 35% tannin, bbls., works.lb. .09½- —
tanks, same basis.....lb. .09 - —
solid, 64% tannin, bgs., c.l...lb. .14 - —
powd., 70% tannin, bgs., c.l..lb. .18 - —
ordinary, solid, 65% tannin, bgs., c.l., ex dock, duty extra..lb. .1275- —
Quebracho extract prices are based on $20.40 freight and $1 insurance per long ton.
Queen of the meadow root bgs....lb. .12 - .18
Quercitron crystals, bbls., l.c.l.... lb. .33½- —
Extract, liquid, bbls., l.c.l..... lb. .14½- —
solid, bxs.....lb. .28 - —
Quicksilver, flasks (76 lbs.) net..flask.76.00 -78.00
Quince seed, bgs.....lb. 1.00 - 1.80
Quinidine, NF, V. cryst., cns.....oz. 1.30 - —
powd., precip., cns.....oz 1.22 Nom.
Sulphate, USP, cns.....oz. .95 - —
Quinine, NF, cns., 100 ozs.....oz. 1.00 - —
Acetate, cns., 100 ozs.....oz No stocks
Arsenate, cns., 100 ozs.....oz. 1.30 - —
Arsenite, cns., 100 ozs.....oz. No stocks
Bisulphate, USP, cns., 100 ozs....oz. .73 - —
Citrate, cns., 100 ozs.....oz. No stocks
Dihydrobromide, bots., 50 ozs....oz. 1.00 Nom.
Dihydrochloride, USP.....oz. 1.00 - —
Ethylcarbonate, NF, cns., 100 ozs.oz. .95 Nom.
Ferrocyanide, cns., 100 ozs.....oz No stocks
Formate, cns., 100 ozs.....oz. 1.20 Nom.
Hydrobromide, NF, cns., 50-oz cns. oz. .91 - —
Hydrochloride, USP, cns., 100 ozs.oz. .91 - —
Hydriodide, cns., 100 ozs.....oz. No stocks
Hypophosphite, cns., 100 ozs....oz 1.40 - —
Phosphate, NF, cns., 100 ozs.....oz. 1.10 - —
Salicylate, NF, cns., 100 ozs.....oz. .95 - —
Sulphate, USP, cns., 100 ozs.....oz. .80½- —
Sulphocarbolate, cns., 100 ozs.....oz. No stocks
Tannate, USP X, cns., 100 ozs....oz. .60 Nom.
Tartrate, cns., 100 ozs.....oz No stocks
Valerate, NF, IV, 100 ozs.....oz. 1.25 - —
Quinine-urea hydrochloride, NF, cns.oz. .97 - —
Quinolin, dms., c.l., works.....lb. .44½- .46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PENN SALT CHEMICALS

**PENNSYLVANIA SALT MANUFACTURING COMPANY**
**of WASHINGTON** • LOS ANGELES • TACOMA, WASH. • PORTLAND, OREGON

## R

R salt, dry, bbls.....lb. .09 - .70
Red, alizarin lake, bbls., dlvd. N. of Tenn. and N. C., E. of Miss., including St. Paul, Minneapolis, Davenport, Rock Island, St. Louis..lb. 1.45 - 2.25

Prices ½c. per lb. higher dlvd. Ala., Fla., Ga., La. (Shreveport, 1½c.), Miss., N. C., S. C., Tenn., Tex. (Dallas, Ft. Worth, 1¼c.). (El Paso, 2c.), Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph, 1.6c. per lb. higher, dlvd Pacific coast prices equaled with Chicago, dlvd. Denver, Pueblo, Salt Lake City, Wichita

Cadmium lithopone, deep shade, bbls., frt. alld. E. of Rockies..lb. 1.25 - —
light shade, bbls., same basis.lb. 1.10 - —
maroon, bbls., same basis.....lb. 1.35 - 1.45
medium shade, bbls., same basis lb 1.20 - —
medium-light shade, bbls., same basis..lb. 1.15 - —
orange-red, bbls., same basis..lb. 1.05 - —
Red cadmium lithopone, all shades, in smaller pkgs. 5c. per lb. higher; all prices are 1c. per lb. higher ex whse., Los Angeles and San Francisco.

Carmine, No. 40 (see Carmine).
Crocus martis (see Red, maroon, oxide)
Dyes (see Dyes, coaltar).
Eosin toner, bbls., works.....lb. 1.35 - —
Indian, dom., pure, bgs., Bethlehem, Easton, E. St. Louis, N Y.. lb. .11½- .11¾
Iron oxide, synth., bbls.....lb. .11½- .11¾
75%-85% copperas oxide, bgs., l.c.l., Bethlehem, Pa.; Copley, O.; Easton, Pa.; E. St. Louis, and Trenton, N. J. lb 05¾- 09¼
Lake C toner, alizarin, bbls., works lb. 1.05 - —
Lithol toner, bbls., works.....lb .80 - —
Lithol-rubin toner, alizarin lake, bbls., works..lb 1.40 - —
Maroon, alizarin lake, 25%, kgs., works..lb .40 - .43
toner, bbls., works.....lb 1.35 - 1.50
Cadmium, deep, bbls., works...lb. 1.20 - —
regular, bbls., works.....lb. 1.10 - —
Iron oxide, bgs., l.c.l., works...lb. .04 - —
MNPT toner, kgs., works.....lb. 3.25 - —

Maroons in smaller pkgs., 5c. per lb. higher

Mercury oxide, tech., bbls., 10,000 lbs., works..lb 2.00 - —
smaller lots, works.....lb. 2.02 - —
Metallic, bbls., works.....lb. 02½- 02¾
Oxide (see Red, iron oxide).
Oxide, Persian gulf, bgs., works..lb. .06¾- .07
Para toner, bbls. .....lb. .87 - .89
chlorinated, kgs. .....lb. .95 - 1.05
concentrated, alizarin lake, kgs., works..lb. .80 - —
Phloxin toner (see Red, eosin toner).
Phosphotungsic, rhodamine Y, kgs., works..lb. 4.45 - —
Pink lake, alizarin, bbls., works..lb. .20 - .26
Purple lake, kgs. .....lb. 1.32 - —
Rose lake, alizarin, bbls., works..lb. .25 - .28
Spanish oxide, grade 1, bbls., c.l., ex dock..lb. .05½- .05¾
l.c.l., ex dock.....lb. .05¾- .06
ex whse., New York.....lb. .06½- —
grade 2, bbls., c.l., ex dock.....lb. .05½- .05½
l.c.l., ex dock.....lb. .05½- .05¾
ex whse., New York.....lb. .06¾- —
Toluidin toner, alizarin lake, kgs., works..lb. 1.35 - —
Turkey, bbls., works.....lb. .14½- —
Tuscan, bbls., frt. equald.....lb. .24½- .25
Venetian, 15%, bgs., works.....lb. .0350- —
20%, bgs., works.....lb. .0370- —
25%, bgs., works.....lb. .0410- —
30%, bgs., works.....lb. .0440- —
35%, bgs., works.....lb. .0465- —
40%, bgs., works.....lb. .0490- —
Vermilion, Amer., bbls. .....lb. .22½- .48
Quicksilver, ctns.....lb. 2.27 - —
Red precipitate, NF, powd., fib. dms.lb. 2.17 - 2.19
Red saunders, wood, grd., bbls.....lb. .35 - —
Resorcinol, tech., dms., works.....lb. .68 - —
USP, cryst., dms., works.....lb. 1.80 - —
powd., dms., works.....lb 2.00 - —
Rhatany root, bgs.....lb. .11 - .12
Rhubarb root, whole, cs.....lb. .50 - .55
powd., bbls. .....lb. .55 - .60
Riboflavin, USP, bots.....kilo.125.00 - —
95%, feeding grade, bots.....kilo.118.75 - —
Rice bran concentrate, dms., cedartown, Ga., or Emeryville, Calif.lb. .79 - —
Rochelle salt, gran., powd., bbls., 5,000 lbs..lb. .31½- —
smaller lots.....lb. .32 - —
Rose flowers, pale, bls. .....lb. .23 - .24
Rosemary flowers, bls. .....lb. 1.55 - 1.65
Leaves, French, bls.....lb. .33 Nom.
Portuguese, bls. .....lb. .08 - .08½
Spanish, bls. .....lb. .13 - .13½
Rosin, gum (see Naval Stores, Protective Coatings market).
Wood, B, dms., c.l., works....100 lbs. 5.50 - 5.60
FF, dms., c.l., works.....100 lbs. 6.60 - 6.70
G, H, I, dms., c.l., works..100 lbs. 8.30 - 8.95
K, dms., c.l., works.....100 lbs. 8.35 - 8.95
M, dms., c.l., works.....100 lbs. 8.40 - 8.95
N, dms., c.l., works.....100 lbs. 8.75 - 9.05
WG, dms., c.l., works.....100 lbs. 8.80 - 9.20
WW, dms., c.l., works.....100 lbs. 8.90 - 9.35
X, dms., c.l., works.....100 lbs. 9.40 - —
Rotenone, cryst., bbls., works.....lb.20.00 -24.00
Extract, liq., dms., works..per unit. 1.50 - —
Powder (see Cube root).
Rottenstone, bgs., c.l., mines....ton.36.00 - —
l.c.l., mines .....ton.43.00 - —
Rue herb, bls. .....lb. .45 - .48
Rutin, bots. .....gram. .23 - .29

## S

Sabadilla seed, powd., bbls.....lb. .52 - .56
activated ground with lime, bbls.lb. .36 - .38
Saccharin, gran., soluble, 1,000 lbs..lb. 1.50 - —
smaller lots .....lb. 1.60 - 1.70
powd., soluble, insoluble, dms., 1,000-lb. lots..lb. 1.75 - —
smaller lots .....lb. 1.65 - 1.85
Safflower (see Saffron, Mexican).
Saffron, Mexican, bls.....lb. 1.00 - 1.10
Spanish, USP, tins.....lb.28.00 -30.00
boxes .....lb.25.00 -26.00
Safrol, dms. .....lb. .85 - 1.45
Sage, Cyprus, bls.....lb. .12 - .12½
Dalmatian, bls. .....lb. .23 - .23½
Greek, fancy, bls.....lb. .13½- .14
Spanish, bls. .....lb. .13½- .14
Syrian, bgs.....lb. .21 Nom.
Sage flour, bgs. .....lb. .09 - .09½
Salicin, bots. .....lb. No stocks
ctns. .....lb. No stocks
Saligenin, dms., works.....lb.20.00 -25.00
Salol, gran., bbls., kgs. .....lb. 1.60 - —
fib. dms. .....lb. 1.02 - 1.03
Powdered salol, 10c. higher
Salt, rock, bgs., c.l.....ton.18.10 - —
l.c.l. .....ton.22.40 -23.00
Table, vacuum, common, fine, bgs., c.l., ton.19.60 -21.00
l.c.l. .....ton.24.40 -26.40
Saltcake, dom., bulk, works.....ton.25.00 -28.00
Chrome (see Chrome cake).
Saltpeter, cryst., bbls., 10 tons 100 lbs.13.15 - —
smaller lots .....100 lbs.13.40 -13.65
gran., bbls., 20 tons.....100 lbs. 8.75 - —
smaller lots .....100 lbs. 9.75 -10.25
powd., bbls., 20 tons.....100 lbs 9.75 - —
smaller lots .....100 lbs.10.75 -11.25

Saltpeter in bags is 25c. per 100 lbs. less than in barrels; in kegs it is $1 more.

Sanguinarine nitrate, bots.....oz. 4.75 - 5.50
Santonin, cryst., powd., cns.....kilo.190.00 -200.00
Saponin, No. 1, cns. .....lb. 2.45 - —
Sarsaparilla root, dom., bls. .....lb. .45 - .50
Honduras, bls. .....lb. .45 - .50
Mexican, bls. .....lb. .35 - .40
Sassafras bark, ord., bls.....lb. .30 - .31
select, bls. .....lb. .60 - .65
Savory, French, bls.....lb. .20 - .20½
Spanish, bls. .....lb. .14 - .14½
Saw palmetto berries, bgs.....lb. .24 - .25
Scammony resin, lump, cns. .....lb. 2.10 - 2.23
powd. cns. .....lb. 2.20 - 2.30
Root, bgs .....lb. .13 - .14
Schaeffer's salt, bgs.....lb. .60 - .62
Seidlitz mixture, bbls., 5,000 lbs...lb. .27½- —
smaller lots.....lb. .28¼- —
kegs, 5,000 lbs. .....lb. .28¼- —
smaller lots .....lb. .28¾- —

Selenium, powd., cns., 10-lb. lots...lb. 2.10 - —
cs., 1,000-lb lots.....lb. 2.00 - —
Senega root, bls.....lb. 1.95 - 2.05
Senna leaf, Alex., half-leaf, bls....lb. .26 - .27
siftings, bgs. .....lb. .23 - .24
Tinnevelly, No. 1, bls.....lb. .20 - .24
No. 2, bls.....lb. .18 - .20
No. 3, bls.....lb. .14 - .15
Pods, bls. .....lb. .14 - .15
Serpentaria root, bls.....lb. 2.75 - 2.90
Shellac, bleached, bonedry, bgs., 1,500-lb lots..lb. .64½- —
bbls., 1,500-lb. lots.....lb. .65 - —
kgs., 1,500-lb. lots.....lb. .67 - —
refined, bgs., 1,500-lb. lots...lb. .74½- —
bbls., 1,500-lb. lots.....lb. .75 - —
kgs., 1,500-lb. lots.....lb. .77 - —

bonedry shellac sales of less than 1,500 lbs., 1c. per lb higher for all packages.

Lemon, No. 1, bgs.....lb. .69 - .70
No. 2, bgs.....lb. .67 - .68
Superfine, bgs., 10 bgs.....lb. .63 - .64
TN, bgs., 10 bgs.....lb. .61 - .62
Shellac in 1 to 9 bgs., 1c. more.
Silica, amorph., dry-grd. 325 mesh, bgs., c.l., lll., works..ton.24.00 -40.00
l.c.l., works.....ton.29.00 - —
wet grd., 320 mesh, bgs., c.l. works..ton.24.00 -40.00
l.c.l., works.....ton.29.00 - —
hard-quartz, 99½%, 325 mesh, bgs., c.l., works..ton.20.00 - —
l.c.l., works.....ton.25.00 - —
140 mesh, bgs., c.l., works....ton.15.00 - —
l.c.l., works.....ton.20.00 - —
Tetrachloride, tech., dms., c.l., works..lb .15½- —
l.c.l., works .....lb .16½- .27

Silver bullion, ingots, cs. .....oz. 74½- —
Cyanide, fib. dms., 2,500-oz lots..oz. 62½- —
1,000-oz. lots .....oz. 62½- —
500-oz. lots .....oz. 62¾- —
250-oz lots .....oz. 63 - —
Nitrate, CP, cryst., bots., 2,500-oz. lots..oz. 48 - —
1,000-oz. lots.....oz 49¼- —
500-oz. lots.....oz .49½- —
250-oz. lots.....oz. .49¾- —

USP granular silver nitrate, 2c. per oz. higher.

Proteinate, mild, USP, bots., dms., 1,000-oz. lots..oz. .45 - —
strong, bots., dms., 1,000-oz. lots. oz. .40 - —
Simarubra bark, bls. .....lb. .85 - .90
Skullcap herb, Eastern, bls. .....lb. .85 Nom.
Western, bls .....lb. .30 - .35
Skunk cabbage root, bls.....lb. .40 - .45
Slate flour, bgs., c.l., works.....ton.11.00 -12.00
l.c.l., ex whse.....ton 20.00 -00.00
Sloe berries, bgs. .....lb. .33 - .40
Smalt, black, ctns. .....lb. .11 - —
Blue, ctns .....lb. .16 - —
Snakeroot, Canada, bls.....lb. .55 - .60
Soapbark, bls.....lb. .19 - .20
crushed, bls., bbls.....lb. .26 - .27
cut, foreign, bbls.....lb. .31 - .32
powd., bbls.....lb. .29 - .30
Soda ash, dense, 58%, paper bgs., c.l., works..100 lbs. 1.35 - —
l.c.l., stock points, zone 1..... 100 lbs. 2.78 - —
2 .....100 lbs. 2.88 - —
3 .....100 lbs. 3.28 - —
4 .....100 lbs. 3.53 - —




# Improve your industrial processes

## in which poor wetting prevails

# with AEROSOL Wetting Agents

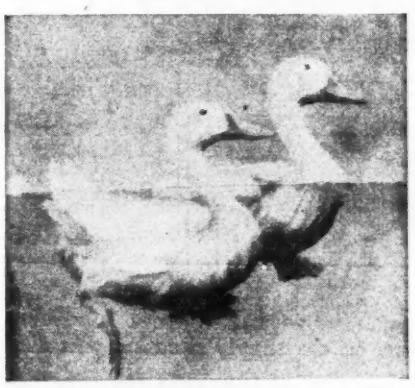
AEROSOL* Wetting Agents, the most powerful available, are extremely effective in bringing about intimate contact when added to water, oils and surface coatings

- ... to increase spreading action
- ... to aid penetration
- ... to regulate characteristics of precipitates
- ... to increase the reaction rates between immiscible liquids.

To satisfy requirements under various industrial conditions, in an ever-broadening field of applications, a number of AEROSOL Wetting Agents have been designed—*and are now again in plentiful supply.*

If you have any processing problems that you believe might be corrected or improved by the application of Wetting Agents, communicate with us or fill in and return the coupon below.

*Reg. U. S. Pat. Off.



This picture illustrates the ability of AEROSOL OT (one of the AEROSOL Wetting Agents) to make a duck, lightly treated with that product, sink by allowing water to penetrate the natural film of oil that ordinarily enables it to float easily. AEROSOL Wetting Agents have found many uses, although a broad field of applications still remains.

## American Cyanamid Company

*Industrial Chemicals Division*

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

AMERICAN CYANAMID COMPANY O. P. 6
Industrial Chemicals Division
30 Rockefeller Plaza, New York 20, N. Y.

Briefly, my processing problem is as follows:

.....

.....

.....

☐ Please send me sample of recommended type AEROSOL Wetting Agent.

☐ Please send me a copy of illustrated book.

Name.....

Company.....

Address.....

City.....State.....

## Soda Ash, Dense—Sodium Sulphide

Soda ash, dense, 58%, bbls., c.l., works. 100 lbs. 1.78 - —
l.c.l., stock points, zone 1..... 100 lbs. 2.18 - —
2 ..... 100 lbs. 3.28 - —
3 ..... 100 lbs. 3.63 - —
4 ..... 100 lbs. 4.23 - —
bulk, c.l., works..... 100 lbs. 1.18 - —
light, 58%, paper bgs., c.l., works. 100 lbs. 1.30 - —
l.c.l., stock points, zone 1..... 100 lbs. 2.65 - —
2 ..... 100 lbs. 2.80 - —
3 ..... 100 lbs. 3.15 - —
4 ..... 100 lbs. 3.75 - —
bbls., c.l., works..... 100 lbs. 1.70 - —
l.c.l., stock points, zone 1..... 100 lbs. 3.05 - —
2 ..... 100 lbs. 3.20 - —
3 ..... 100 lbs. 3.55 - —
4 ..... 100 lbs. 4.15 - —
bulk, c.l., works..... 100 lbs. 1.10 - —

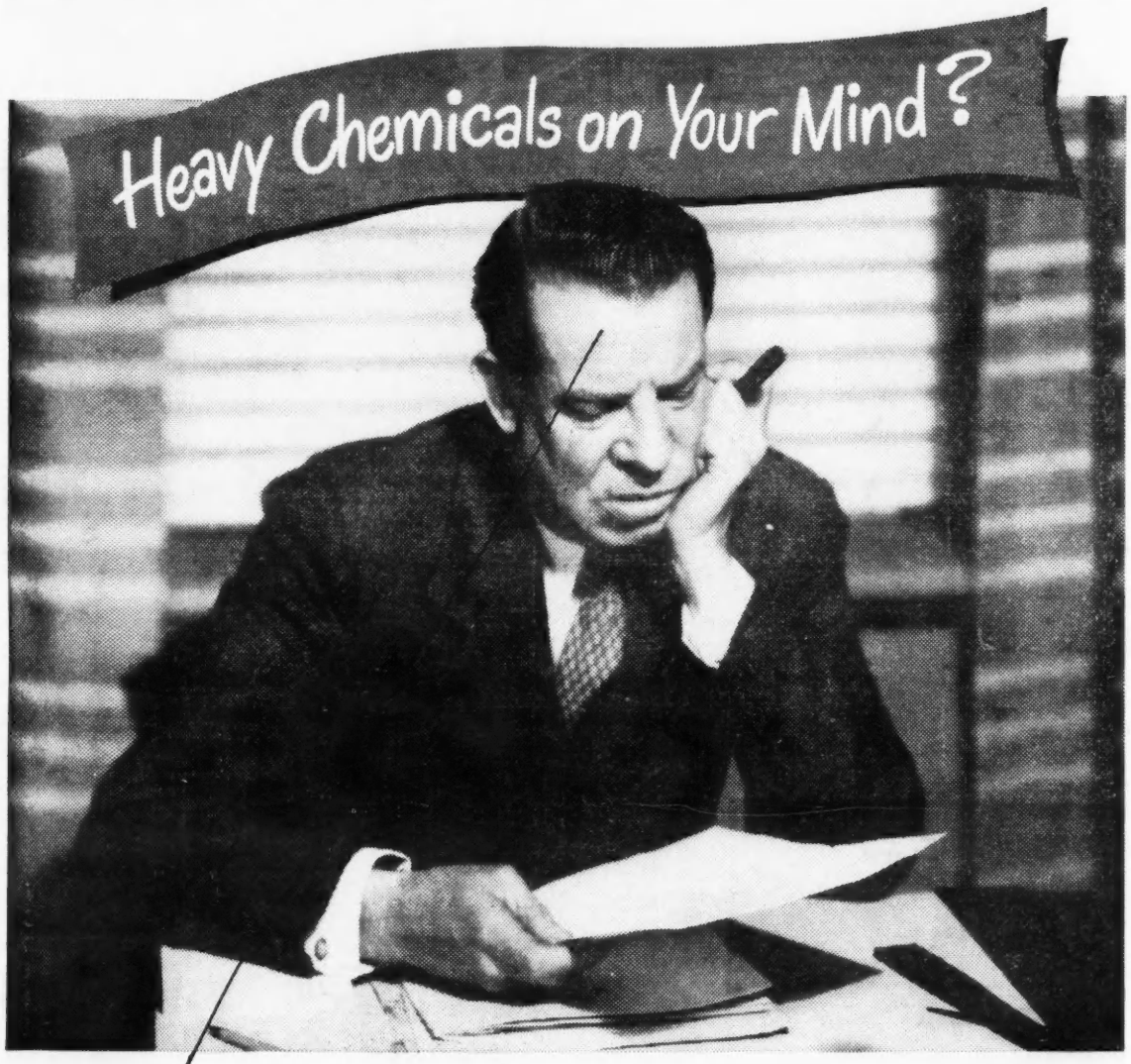
Soda ash prices f.o.b. stock points in zones indicated. Minimum quantity 500 lbs. For less than 500 lbs. prices are ex-warehouse. Sales zones are: (1) All States E. of Miss R and N. of south bound of Ky., 31° Tex. E. of 100°; S. of 31° Fla.; also Me., N. H., and Vt., in which there are special county zones; Davenport, Ia., and St. Louis; (2) Ark. E. of 98° Ga.; Iowa (except Davenport), Minn; Mo. (except St. Louis), Neb., E. of 98°, N. C., S. C., Tenn. and Tex. N. of 31° and E. of 100° (except Wichita Falls); also Ala., La. and Miss. No. of 31°; (3) Ark. W. of 96°, Kan., Neb., W. of 98°, N. D., Okla., S. D., Tex., W. of 100° (including Wichita Falls excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah, Wyo., and El Paso, Tex

Soda caustic, flake, powd., 76%, dms., c.l., works..100 lbs. 3.25 - —
l.c.l., dlvd. zone 1....100 lbs. 4.00 - —
zone 2 ..... 100 lbs. 4.75 - —
zone 3 ..... 100 lbs. 5.10 - —
zone 4 ..... 100 lbs. 5.70 - —
liquid, 50%, sellers' tanks, works, dry basis..100 lbs. 2.15 - 2.25
70%, sellers' tanks, works, dry basis..100 lbs. 2.35 - —
60%, rayon type, tanks, works, dry basis..100 lbs. 2.25 - —
solid, 76%, dms., c.l., works.100 lbs. 2.85 - —
l.c.l., dlvd. zone 1.....100 lbs. 4.20 - —
zone 2 ..... 100 lbs. 4.35 - —
zone 3 ..... 100 lbs. 4.70 - —
zone 4 ..... 100 lbs. 5.30 - —

Prices f.o.b. stock points in zones indicated, minimum quantity 500 lbs.; for less than 500 lbs., prices are ex-warehouse. Soda caustic zones are same as soda ash

Sal, bgs., c.l., works.....100 lbs. 1.30 - —
Sodium acetate, anhyd., dms., works, lb. .09½- .11
NF, cryst., bbls., works.....lb. 07½- .08½
Alginate, refined, water soluble, bbls., works .lb. .79 - —
semi-refined, bbls., works.....lb. .42 - —
white, powd., dms, works.....lb. 1.50 - 1.60
Alkylbenzene-sulphate, dms., works. lb. .13 - —
Aluminate, for water treat., bgs., c.l., works..100 lbs. 7.60 - —
l.c.l., works.....100 lbs. 8.40 - —
ether uses, bgs., c.l., works.100 lbs. 7.00 - —
l.c.l., works.....100 lbs. 7.50 - 8.00
Antimoniate, bbls., c.l., dlvd.lb. .29 - —
l.c.l., dlvd. .....lb. .30 - —
Arsenate, dealers, dms., c.l., works, lb. .12 - —
l.c.l., works .....lb. .13¼- .13¾
Arsenite, gray, dealers, dms., c.l., works..lb. .11¾- —
l.c.l., works .....lb. .12½- .12¾
Benzoate, tech., bbls., 2 tons....lb. .39 - —
smaller lots.....lb. .40 - .41
USP, dms., 2 tons.....lb. .46 - —
smaller lots.....lb. .47 - .52
Bicarbonate, USP, gran., bgs., c.l., works..100 lbs. 2.35 - —
l.c.l., works .....100 lbs. 3.00 - —
powd., bgs., c.l., works...100 lbs. 1.95 - —
l.c.l., works .....100 lbs. 2.60 - —
Bichromate, bgs., c.l., works.....lb. .09½- —
l.c.l., works.....lb. .09¾- .09½
Sodium bichromate, in bbls., ¼c. higher.
Bifluoride, bbls., c.l., works, frt. equald..lb. .11½- .12¼
l.c.l., same basis.....lb. .11¾- .12½
Bisulphate, bulk, c.l., works..100 lbs. 1.50 - —
dms., c.l., works.....100 lbs. 2.25 - —
l.c.l., works.....100 lbs. 2.65 - —
Bisulphite, powd., bbls., c.l., works, 100 lbs. 3.50 - —
l.c.l., works .....100 lbs. 4.00 - —
solut, 35°, bbls., c.l., works..100 lbs. 1.10 - —
l.c.l., works .....100 lbs. 1.50 - —
Borate (see Borax).
Bromide, USP, bbls., kgs., works, lb. .33 - .34
Cacodylate, bots., dms.....lb. 9.00 -12.00
Carbonate (see Soda ash, Soda sal, Sodium monohydrate).
Chlorate, cryst., dms., c.l., works..lb. .07¼- —
l.c.l., works .....lb. .07½- 08
powd., kgs., works.....lb. 08¾- —
Chloride (see Salt).

Sodium chlorite, tech., dms., works.lb. .75 - —
Chromate, bbls., dms., c.l., works..lb. .11¼- —
l.c.l., works.....lb. .11¾- .11¼
Citrate, USP VIII, bbls.....lb. .20 - —
dms. .....lb. .21 - .25
USP XIII, gran., bbls.....lb. .26 - —
dms. .....lb. .27 - .31
Sodium citrate, USP XIII, powd., prices ½c. higher.
Cyanide, 96-98%, dms.....lb. .14½- .15
bbls., c.l., works.....100 lbs. 1.70 - —
Diacetate, 33-35% acidity, bbls., works..lb. .10½- .11¼
anhydrous dms., works.....lb. .13 - .14½
Fluoride, white, 90%, bbls., c.l., works..lb. .09¾- —
l.c.l., works.....lb. .10 - —
95%, bbls., c.l., works.....lb. .10 - —
l.c.l., works.....lb. .10¼- —
Formate, bgs., c.l., dlvd.....100 lbs. 7.10 - —
l.c.l. .....100 lbs. 8.15 - —
Glutamate, monobasic, kgs.....lb. 1.55 - 1.60
Glycerophosphate, NF, flake, bbls. lb. 1.65 - 1.80
powder, bbls. .....lb. 1.70 - 1.85
solution, 75%, cbys.....lb. 1.00 - 1.10
50%, cbys. .....lb. .82 - —
Hydrosulphide (see Sodium sulphydrate).
Hydrosulphite, dms., c.l., frt. alld..lb. .18½- .19
l.c.l., frt. alld.....lb. .19 - .20
Hydroxide, tech (see Soda, caustic).
USP, sticks, dms.....lb. .24 - .29
Hypophosphite, NF, cns.....lb. .95 - 1.0
Hyposulphite, tech., cryst., bgs., c.l., works, frt. equald.100 lbs. 2.90 - 3.00
l.c.l., same basis.....100 lbs. 3.30 - —
pea cryst., bgs., metro. area. 100 lbs. 3.30 - —
Soda, hyposulphite, crystals, in bbls., 40c. higher; pea crystals, dms., 50c. higher.
USP (see Sodium thiosulphate)
Iodide, USP, dms., jars.....lb. 2.72 - 2.83
Mandelate, dms. .....lb 3.25 - 3.35
Metaborate, gran., bgs., c.l., works, ton.90.50 - —
l.c.l., works.....ton.108.00 -113.00
Sodium metaborate in bbls., $20 per ton higher
Metal, dms., works.....lb. .15 - —
Metanilate, bgs .....lb 48 - —
Metasilicate, anhyd., bbls., c.l., works, 100 lbs 4.00 - —
gran., bgs., c.l., wrks.....100 lbs. 3.25 - —
l.c.l. .....100 lbs. 4.35 - 4.60
bbls., c.l., works.....100 lbs 3.65 - —
l.c.l. .....100 lbs. 4.75 - 5.00
Molybdate, anhyd., works.....lb. 50 - —
Monohydrate, bgs., c.l., works. 100 lbs. 2.00 - —
l.c.l., works .....100 lbs 2.45 - —
Naphthionate, bbls.....lb. 60 - —
Nitrate, crude, dms., bgs., c.l., works. ton.40.50 - —
bulk, c.l., works.....ton.37.00 - —
Imp., 100-lb bgs., c.l., All Gulf, Pac. whse..ton.48.00 - —
bulk, c.l., same basis .....ton 44.50 - —
Nitrite, 99%, bbls., c.l., works, frt. equald..lb. .06½- —
West coast ports.. 100 lbs 8.00 - 8.05
l.c.l., dlvd. .....100 lbs 8.90 -11.00
Orthosilicate, anhyd., dms., c.l., works..100 lbs. 5.25 - —
l.c.l., same basis.....100 lbs 5.55 - 7.1
hydrated, flake, bbls..c.l. works. 100 lbs. 4.25 - —
l.c.l. works .....100 lbs. 5.50 - 5.75
Oxalate, neut., bgs., works..... lb. .09 - .10
Pentachlorophenate, briquets, bgs., works, frt. equald..lb. .17 - .19
powd., bgs., c.l., same basis..lb. .16 - .16¼
l.c.l., same basis.....lb. .17 - —
kgs., l.c.l., works, frt. equald lb. .19 - —
Perborate, USP, tech., bbls., c.l., works..lb. .17¾- —
l.c.l., works .....lb. .18¼- —
Peroxide, dms. c.l., dlvd. E. of Miss. lb. .14 - —
smaller lots same basis ..lb .17 - —
Phosphate, dibasic, anhyd., bgs., c.l., works..100 lbs. 6.50 - 7.50
l.c.l., works .....100 lbs 7.25 - 8.20
cryst., bgs., c.l., works..100 lbs. 3.50 - —
l.c.l., works.....100 lbs. 3.75 - 3.90
NF, dried, powd., dms., works.lb. .16 - 16¼
monobasic, anhyd., bgs., c.l., works. 100 lbs. 7.50 - 8.25
l.c.l., works.....100 lbs. 8.00 - 9.00
tribasic, anhyd., bgs., c.l., works, frt. equald..100 lbs. 9.00 - —
l.c.l., same basis.....100 lbs. 9.00 - —
cryst., bgs., c.l., works, frt. equald..100 lbs. 3.45 - —
l.c.l., same basis.....100 lbs. 3.95 - —
kgs., c.l., same basis.....100 lbs. 4.25 - —
l.c.l., same basis.....100 lbs. 4.45 - —
Sodium phosphates in bbls., 40c. higher than bgs.
USP (see Sodium phosphate, dibasic).
Phosphoaluminate, bgs., c.l., works 100 lbs. 7.00 - —
l.c.l., works.....100 lbs. 7.50 - 8.00
Prussiate, yellow, bgs.....lb. .12 - —
bbls. .....lb. 12¼- —
Pyrophosphate, acid, bgs., c.l., works, frt. equald..100 lbs.11.25 -13.00
l.c.l., same basis.....100 lbs.11.75 -13.50
ferric, dms., 10,000 lbs., works. lb. .22 - —
smaller lots works..... lb 22½- —
tetrabasic, anhyd., bgs., c.l., works, frt. equald..100 lbs. 6.50 - 6.65
l.c.l. .....100 lbs. 7.00 - 7.15
Ricinolate, tech., bbls.....lb. No stocks
Salicylate, dms.....lb. .57 - .60
Sesquicarbonate, bgs., c.l., works... 100 lbs. 1.85 - —
bbls., c.l., works.....100 lbs. 2.25 - —
l.c.l., dlvd. zone 1.....100 lbs. 3.35 - —
zone 2.....100 lbs 3.50 - —
zone 3.....100 lbs. 3.75 - —
zone 4.....100 lbs. 4.15 - —
Sodium sesquicarbonate l.c.l. price zones are same as those for soda ash.
Sesquisilicate, bbls., c.l., works..... 100 lbs. 4.15 - —
l.c.l., dlvd. .....100 lbs. 5.40 - 5.65
Silicate, 40°, turbid., dms., c.l., works..100 lbs. 1.00 - —
l.c.l., works .....100 lbs. 1.25 - 1.35
tanks, works.....ton.15.00 - —
42°, turbid, dms., c.l., works..... 100 lbs. 1.65 - —
l.c.l., works .....100 lbs. 1.90 - 2.00
tanks, works .....ton.20.00 - —
Silicofluoride, bbls., c.l., works....lb. .05 - —
l.c.l., works.....lb. .05½- .06
Stannate dms., works, frt. alld. E..lb. .58 - —
Stearate, bb. works.....lb. .19 - .24
Sulphate, NF VIII, dried, powd., bbls. lb. .16 - 16¼
tech anhyd., bgs., c.l., works. 100 lbs. 2.10 -
l.c.l., works.....100 lbs. 2.35 - 2.60
cryst (see Glauber's salt)
USP, cryst., gran., bbls.....lb. .15 - 15½
Sulphoindigotate, bbls., works.....lb. .22 - —
Sulphite, cryst., bbls., c.l., works. 100 lbs. 3.75 - —
l.c.l., dlvd.....100 lbs. 4.15 - —
flake, bbls., c.l., works....100 lbs. 4.50 - 5.50
l.c.l., works.....100 lbs. 5.00 - 5.75
lump, bbls., c.l., works...100 lbs. 4.00 - 5.50
l.c.l., dlvd.....100 lbs. 4.50 - 5.75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Caustic Soda . . . Soda Ash . . . Bicarbonate of Soda . . . Liquid Chlorine . . . Chlorine Dioxide . . . Ammonia, Anhydrous & Aqua . . . HTH Products . . . Fused Alkali Products . . . Dry Ice . . . Carbonic Gas . . . Sodium Chlorite Products . . . Sodium Methylate

Sodium sulphite, anhyd., tech., powd., bbls., c.l., frt. equald..100 lbs. 2.50 - 2.75
l.c.l., same basis.....100 lbs. 3.25 - 3.75
crystals, bgs., c.l., works...100 lbs. 2.60 - —
l.c.l., works.....100 lbs 3.00 - —
bbls., c.l., works.....100 lbs. 3.00 - —
l.c.l., works.....100 lbs. 3.40 - —
powd., bbls., c.l., works.....100 lbs. 5.25 - —
l.c.l., works.....100 lbs. 5.50 - 6.00
Sulphocarbolate, USP 1X, gran., bbls., dms..lb. .33 - .34
powd., bbls.....lb. .36 - .37
Sulphocyanide, CP, dms.....lb. .55 - .65
tech., dms., works.....lb .30 - —
Sulphoricinoleate, bbls.....lb. .12 - —
Sulphydrate, flake, 70-72%, dms., c.l., lb. .05 - —
liquid, 45%, tanks, works.....lb. .04½ - —
Thiocyanate (see Sodium sulphocyanide).
Titanate, ctns., c.l., works.....lb .10 - —
5 tons, works.....lb. .10¼ - —
2,000 lbs. and less, works.....lb. .10½ - .13½
Tripolyphosphate, bgs., c.l., works, frt. equald..lb. .07½ - —
l.c.l. .....lb. .07¾ - —
Thiosulphate, tech (see Sodium hyposulphite).
USP, cryst., bbls .....lb .10 - .12
Tungstate, tech., bgs.....lb. 1.40 - 1.45
Sodium-ammonium phosphate, bbls., works, frt. equald..lb. .23 - —
Sodium-carboxymethylcellulose, high vis., ctns., 2,000 lbs., works frt. alld..lb. .66 - —
smaller quantities, same basis.lb. .70 - —
Sodium-carboxymethyl cellulose, low and med. vis., ctns., 2,000 lbs. same basis..lb. .62 - —
smaller quantities, same basis.lb. .66 - —
Sodium-cinchophen, bots., dms., works. lb 5.00 - 5.10
Sodium-formaldehyde sulfoxylate, dlvd., dms..lb. .22 - .26
Sodium-sulpha drugs (see Sulpha names).
Solvent naphtha, coaltar, dms., works. gal. .27 - .30
high-flash, dms., works.....gal. .27 - .30
Petroleum, 100° F. flash, tanks, Baytown, Tex..gal. .27 - —
150°F. flash, tanks, same basis. gal. .27 - —
Sorbitol, com'l, dms., c.l., works..lb. .25½ - —
l.c.l., works.....lb. .26 - —
crystalline, dms., works.....lb. .50 - —
solution, aqueous, dms., c.l., works.. lb. .1855 - —
ton lots, works.....lb. .196 - —
Soybean protein, chemically isolated, 40,000 lbs., works..lb. .26½ - —
20,000 lbs., works.....lb. .26¾ - —
smaller lots, works.....lb. .27 - .30½
mechanically refined, bgs., 40,000 lbs., works..lb. .061 - —
20,000 lbs., works.....lb. .063 - —
smaller lots, works.....lb. .065 - —
Spearmint leaves, bls. .....lb. .48 - .49
Spikenard root, bls.....lb. .45 - .48
Spruce extract, liq., reg., tanks, works. lb. .04¾ - —
powd., super, bgs., c.l., works..lb. .05¼ - —
Squaw vine, leaves, bls.....lb. .45 - .50
Squill, red, fortified, powd., bbls., boxs. lb 1.60 - —
White, bls. .....lb. .08 - .10
powd., bbls., bxs.....lb. .14 - .18
St. Ignatius beans, bgs.....lb. No stocks.
St. John's bread, edible, bls.....lb. .12 - .19
Starch, corn, pearl, paper bgs., c.l. 100 lbs. 7.01 - —
Chicago .....100 lbs. 6.42 - —
l.c.l. .....100 lbs. 7.16 - —
powd., paper bgs., c.l.....100 lbs. 7.12 - —
Chicago .....100 lbs. 6.53 - —
l.c.l. .....100 lbs. 7.27 - —
Prices for corn starch in cotton bags, 17c. higher
Potato, dom., bgs., c.l.....lb. .08 - —
l.c.l. .....lb. .09¼ - .09¾
imported, bgs., c.l.....lb. .09 - —
Rice, bgs., c.l.....lb. No stocks.
Sweetpotato, bgs., c.l.....lb. No stocks.
Wheat, bgs.....lb. .0705 - .0750
Stavesacre seed, bgs.....lb. .60 - .61
Stearin, oleo (see Oleostearin)
Stillingia root, bls.....lb. .32 - .33
Stonecrop, bbls.....lb. .07½ - .08
Storax, USP, cs.....lb. 1.50 - 1.60
Stramonium leaves, bgs.....lb. .19 - .20
Seed, bgs. .....lb. .20 - .21
Streptomycin, hospitals.....gram. 2.20 - —
wholesalers .....gram. 1.76 - —
Strontium bromide, NF, ens., dms. lb. .62 - —
Carbonate, 90%, bbls.....lb. .14 - .16
98% bbls.....lb. .23 - .25
Chloride, tech., bbls.....lb. .22 - .24
Chromate, bgs., frt. equald.....lb. .43½ - .44
Iodide, jars, 25 lbs.....lb. 3.20 - 3.26
Lactate, dms.....lb. 1.50 - 1.55
Nitrate, bbls., c.l., works.....lb. .07½ - —
l.c.l., works.....lb. .08¼ - .08¾
Oxalate, bbls., works.....lb. .38 - .40
Salicylate, NF, dms.....lb 1.25 - 1.32
Sulphate, air-floated, 99% 325 mesh, bbls., works..ton.58.00 - —
Strontium-calcium sulphide, phosphorescent dms., works.lb. 2.50 - 2.85
Strophanthin, bots.....oz.30.00 - 50.00
Strophanthus seed, Kombe, bgs....lb. 2.50 Nom.
Strychnine, NF, powd., ens., 100 ozs. oz. 1.25 - —
Sulphate, USP, powd., ens., 100 ozs. oz. 1.00 - —
Styrene, monomer, tanks, works....lb. .15 - —
Styrolyl acetate, beta.....lb. 2.50 - 3.10
Sucrose octa-acetate, denat., bbls., l.c.l., works..lb. .55 - —
tech., bbls., l.c.l., works.....lb. .50 - —
Sugar coloring (see Caramel coloring).
Sugar of milk (see Milk sugar).
Sulphabenzamide, dms., works.....lb. 4.00 - —
Sulphadiazin, USP, dms., works...lb. 9.00 - —
Sulphadiazin - sodium, USP, dms., works..lb.10.50 - —
Sulphaguanidin, USP, dms., works, lb. 4.50 - 4.60
Sulphamerazin, USP, dms., works, lb. 9.00 - —
Sulphamazerin - sodium, USP, dms., works..lb.10.50 - —
Sulphanilamide, USP, powd., cons., works..lb. 1.05 - 1.10
Sulphanilamide, 80-60 mesh, 10c. higher.
Sulphapyridin, NF, powd., bots., tins, works..lb. 7.00 - 7.30
Sulphapyridin - sodium, powd., bots., dms., works..lb. 7.50 - 7.80
Sulphathiazole, USP, powd., dms., works..lb. 3.00 - 3.15
Sulphathiazole - sodium, USP, dms., works..lb. 3.00 - 3.15
Sulphonethylmethane, NF, kgs.....lb. 6.75 - 6.85
Sulphonmethane, NF, kgs.....lb. 5.25 - 5.35
Sulphur, crude, c.l., bulk, mines, contract..long ton.18.00 - —
vessel, f.o.b. Gulf ports, export.... long ton.22.00 - —
flour, comm'l, 99½%, bgs., c.l., works..100 lbs. 1.90 - —
l.c.l., works .....100 lbs. 2.50 - 2.85
precipitated, USP, bbls., kgs....lb. .18 - .30
refined, flour, light refined, USP, bgs., c.l., works..100 lbs. 3.70 - —
l.c.l., works.....100 lbs. 4.05 - 6.10
heavy, bgs., c.l., works..100 lbs. 3.50 - —
l.c.l., works.....100 lbs. 3.85 - 5.90

Sulphur, refined, flowers, USP, bgs., c.l..100 lbs. 3.95 - —
l.c.l., works.....100 lbs. 4.30 - 6.85
Refined sulphur flowers in bbls., 75c. higher.
rock, bgs., c.l., works.....100 lbs 2.15 - 2.75
l.c.l., works.....100 lbs. 2.75 - 3.50
roll, bgs., c.l., works.....100 lbs. 3.40 - —
l.c.l., works.....100 lbs. 3.75 - 5.80
rubbermakers' bgs., c.l., works, 100 lbs. 1.50 - 2.00
Chloride, 55-gal. dms., c.l., works..lb. .03¼ - —
l.c.l., works.....lb. .04¼ - —
10 gal. dms., c.l., works.....lb. .07¾ - —
l.c.l., works.....lb. .08¼ - —
Dioxide, liquid, com'l, cyls., works. lb. .09 - —
multi-unit cars, works.....lb. .0635 - —
tanks, works .....lb. .045 - 0535
refrigeration, cyls. l.c.l. works. lb. .16 - —
Iodide, bots., jars.....lb. 3.90 - 4.11
Sumac bark, 25%, grd., bgs., ex dock. ton.85.00 - —
Extract, No. 1, bbls.....lb. 10½ - —
No. 2, bbls.....lb. .09 - —
crystals, bbls.....lb. .40 - —
stainless, bbls. .....lb 14½ - —
Leaves 30%, bgs., ex dock.....ton.88.00 - —
Superphosphate run-of-pile, under 22% a.p.a. pulv., bulk, Balto.unit-ton. .76¼ - .78
Florida .....unit-ton. 56 - 59
other points.....unit-ton. 57 - 59
Delivery points, Ariz., Calif., Colo., Ida., Kans., Nev., N. M., Ore., Utah, Wash. 88½c. per unit-ton plus frt. charges from Anaconda, Mont., in excess of $18.03 per ton; guaranteed 18, 19 or 20% a.p.a. ½c per unit-ton higher

Superphosphate, triple, 48% or more, a.p.a. pulv., bulk, Balto.unit-ton. .71 - —
South Carolina.....unit-ton. 75 - —
Tennessee .....unit-ton. 80 - —
Prices on 48% triple superphosphate in other states and D.C., 11c. per unit-ton plus frt. charges from E. Tampa, Fla. Superphosphate, gran., 2c. per unit ton higher than pulverized.
Sweet basil, bls.....lb. 1.10 - 1.25

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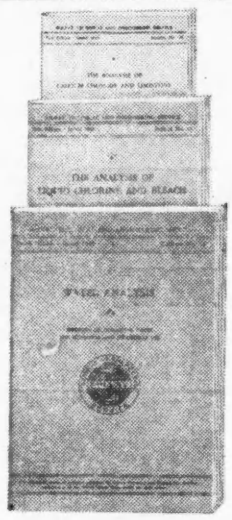
Talc, dom., ordinary, grd., bgs., c.l., New York works..ton.21.00 - —
l.c.l., works.....ton.22.50 -24.50
Calif., bgs., c.l., works .....ton.22.00 -30.00
Vermont, bgs., c.l., works..ton.14.00 - —
l.c.l., works .....ton.17.50 - —
fibrous, New York, off-color, ground, bgs., c.l., works.....ton.24.00 - —
l.c.l. .....ton.26.50 -28.00
88-93-99.95%, grd., bgs., c.l., works..ton.21.00 - —
l.c.l., works.....ton.24.50 - —
98-99.5%, grd., bgs., c.l., works, ton.22.00 -28.00
l.c.l., works .....ton.27.00 -32.00
Imp., Canada, grd., bgs., c.l.....ton.35.00 45.00
Tallow, inedible, extra, loose.....lb. .16¼ - —
fancy, loose .....lb. .16½ - —
special, loose .....lb. .15¾ - —
sulphonated, 25%, dms.....lb. .08½ - .09
50%, dms .....lb. .12½ - .13
Tamarinds, bbls. .....lb. .10 - .12
Tankage, animal, feeding, 9-11% ammon., bulk..unit-ton. 6.60 - —
Chicago .....unit-ton. 7.00 - —

### Sodium Sulphite—Terpinglycol Ether

Tankage, animal, fertilizer, 9% ammon., 10% b.p.l., Chicago..... unit-ton. No stocks
10-11% ammon., 15% b.p.l., bulk bulk, unit-ton. No stocks.
Tansy leaves, bls. .....lb. .15 - .16
Tapioca flour, high grade, bgs.....lb. 10¼ - .10¾
medium grades, bgs.....lb. .09¼ - 09¾
lava, bgs. .....lb. No stocks.
Tar acid oil, 15-18%, ret. dms., c.l., works..gal. .53 - —
l.c.l., works .....gal. .56 - —
tanks, works .....gal. .47 - —
25-28%, dms., c.l., works.....gal. .66 - —
l.c.l., works .....gal. .69 - —
tanks, works .....gal. .60 - —
Tar, coal (see Coaltar)
Pine (see Pinetar)
Tara pods, bgs., c.l., ex dock U. S. ports..long ton. No prices
powd., bgs., c.l., same basis.long ton.225.00 Nom.
Tarragon herb, bgs.....lb. .40 - .45
Leaves, bgs. .....lb. 1.00 - 1.05
Tartar emetic, tech., gran., or powd., bbls., kgs..lb. .44 - —
dms. .....lb. .44½ - .47
USP, powd., bbls., dms., kgs...lb. .49 - .52
Terpin hydrate, com'l, bbls., c.l....lb. .24½ - —
l.c.l. .....lb. .25 - .25½
USP, cryst., bbls., dms.....lb. .95 - .97
powd., bbls., dms.....lb. 1.00 - 1.02
Terpineol, Alpha (see A)
com'l, dms., c.l., South.....lb. .13½ - —
l.c.l., South.....lb. .14 - —
tanks, South.....lb. .13 - —
prime, dms.....lb. .67 - .82
extra, dms .....lb. .77 - .97
Terpinglycol ether, dms., c.l., works. lb. .19½ - —
l.c.l., works.....lb. .20 - —
tanks, works.....lb. .19 - —

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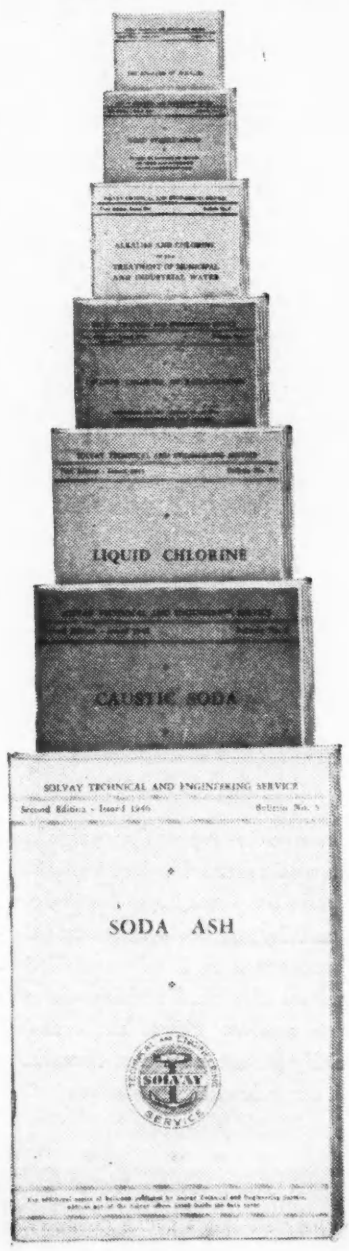


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**Terpinyl Acetate—V.M.P. Naphtha**

Terpinyl acetate, extra, cns., dms. lb. .65 - 1.10
prime, cns., dms. lb. .61 - 1.00
Terra alba (see Gypsum).
Tetrachloroethane, dms., works. lb. .08 - .08½
Tetrachloroethylene, USP, 55-gal. dms., works. lb. .20 - .21½
smaller dms., works. lb. .23½- .25
tech. (see Perchloroethylene).
Tetraethyl orthosilicate, dms., works, lb. .65 - —
Tetraethylenepentamine, dms., c.l., works. lb. .51½- —
l.c.l., works. lb. .52 - —
tanks lb. .50 - —
Tetraethyl pyrophosphate, dms., c.l., works. lb. .80 - —
l.c.l., works. lb. .90 - 1.25
Tetrapotassium phosphate (see Potassium phosphate).
Tetrasodium pyrophosphate (see Sodium pyrophosphate).
Thallium sulphate, 90%, bots., dlvd. lb 15.00 -17.50
Theobromine, bots., kgs. lb. 6.00 - 6.25
Thiamine hydrochloride, dms., 100 grams. kilo.160.00 - —
Thiocarbanilide, dms. lb. .24 - —
Thiodiphenylamine (see Phenothiazine).
Thiouracil, dms., works. lb. 5.50 - 5.60
Thiourea, tech., dms., works. lb. 40 - —
Therium nitrate, cs., works. lb 3.50 - —
Thyme, French, bgs. lb. .25 - .28
futures, bgs. lb. .19 - .20
Spanish, bls. lb. .11 - .11½
Thymol, USP, kgs. lb 3.65 - 3.75
Iodide, NF, dms. lb. 3.85 - 4.25
Timbo root (see Cube root).

Tin chloride (stannic), anhyd., dms. lb. .97 - .98
Crystals, bgs., bbls., works. lb. .71½- —
Metal, Bolivian. lb. 1.03 - —
Straits lb. 1.03 - —
Oxide, bbls. lb. 1.01 - 1.02
Tetrachloride, anhyd., dms., works, lb. .60 - .62
Titanium dioxide, anatase, chalk-resistant, bgs., c.l., dlvd. lb. .17½- .18
l.c.l., dlvd. lb. .18 - .19
plain, bgs., c.l., dlvd. lb. .17½- .18
l.c.l., dlvd. lb. .18 - .19
rutile, natural, granular, bgs., c.l., works. lb. .06½- —
l.c.l., works. lb. .06½- —
milled, bgs., c.l., works. lb. .06½- —
l.c.l., works. lb. .06¾- —
nonchalking, bgs., c.l., dlvd. E. lb. .19½- —
l.c.l., dlvd. E. lb. .20 - .20½
Hydride, cns., works. lb. 7.00 - 8.00
Pigment, barium base, bgs., c.l., dlvd. lb. .07½- —
l.c.l., dlvd. lb. .08 —
Calcium base, bgs., c.l., dlvd. lb. .06¾- .07
l.c.l., dlvd. lb. .07¾- .07½
Calcium-rutile base, bgs., c.l., dlvd. lb. .06¾- —
l.c.l., dlvd. lb. .07¼- —
Magnesium base, bgs., c.l., dlvd. lb. No prices
l.c.l., dlvd. lb. No prices

Titanium dioxide and pigment in bbls., ¼c. higher; Pac. coast, c.l., dlvd., l.c.l., ex whse., ½c. higher.

Tin tetrachloride, CP, 55-gal. dms. lb. .54½- .55
smaller, pkgs., works. lb. .65 - 1.22
technical, 55-gal. dms., works. lb. .32 - —
smaller pkgs., works. lb. .40 - 1.00
Tolu balsam, cns. lb. 3.25 - 3.50
Toluene (see Toluol).
Tolidin base (see Orthotolidin).
Toluol (toluene), coaltar, 2° indust., ret. dms., works. gal. .35 - .37
tanks, E. of Omaha, frt. alld. gal. .28 - .30
W. of Minnequa, Colo., works. gal. .28 - .30
1° nitration, ret. dms., works. gal. .35 - .37
tanks, E. of Omaha, frt. alld. gal. .28 - .30
W. of Minnequa, Colo., works. gal. .28 - .30

Prices on 2° toluol from petroleum, tanks, delivered (maximum freight allowances in parentheses) are:—Ark., 30c. (3¾c.); Chicago, 30c. (2¾c.); Del.-Md.-D. C., 30c. (2¾c.); Detroit, 30c. (1 8/10c.); La., 30c. (3¾c.); N. C. & E. Tenn., (3½c.); W. Tenn., 30c. (3¾c.), and W. Va. 30c, 30c. (3c.); N. E., 30c. (2¼c.); N. J., 30c.; N. Y., 30c.; Pa., 30c. (2¾c.); S. C., 30c. (6c.); Va., 30c. (2¾c.).

Tonga, 50% bark and vine, bls. lb. .85 - .95
Tonka beans, Angostura, cks. lb 1.75 - 1.80
Brazilian, cs. lb. .85 - .90
Surinam, cs. lb. .85 - .90
Totaquine, USP, 100-oz. lots. oz. .52 - —
Triacetin, dms., works. lb. .40½- —
Tributyl citrate, dms. lb. .41 - .43
smaller pks. lb. .46 - .52
Phosphate, dms., l.c.l., frt. alld., E. of Rockies. lb. .66 - —
smaller pkgs. lb. .71 - —
Tributylamine, dms., c.l., works. lb. .78 - —
l.c.l., works lb. .81 - —
tanks, same basis. lb. .07½- .09¼

Trichlorobenzene, dms., c.l., works, frt. alld. or equald. lb. .08½- .11
l.c.l., same basis. lb. .09½- .12
Trichloroethane, dms., c.l., works. lb. .12 - —
tanks, works. lb. .11 - —
l.c.l., works. lb. .13 - —
Trichloroethylene, tanks, c.l., frt. alld., zone 1. lb. .09½- .10
Zone 2. lb. .10 - —
Zone 3. lb. .10½- —
Zone 4. lb. .10¾- —

Trichloroethylene dm., c.l. prices ½c. higher; l.c.l. 1¼c. higher. Zones are—(1) Conn., Del., Ill., Ind., Ia., Ky., Me., Md., Mass., Mich., Minn., Mo., N. J., N. H., N. Y., N. C., Ohio, Pa., R. I., Tenn., Vt., Va., W. Va., Wis., Omaha, K. C., Kan.; (2) Ala., Ark., Fla., Ga., Kan., La., Miss., Neb., N. D., Okla., S. C., S. D.; (3) Col., Mont., (E), N. M., Tex., Wyo.; (4) Ariz., Cal., Idaho, Mont. (W), Nev., Ore., Utah, Wash.

Tricresyl phosphate, coaltar, dms., c.l., frt. equald. lb. .37½- —
l.c.l., dlvd. lb. .38 - —
tanks, dlvd. lb. .36½- —
petroleum, dms., c.l., dlvd. lb. .38½- —
l.c.l., dlvd. lb. .39 - —
tanks, dlvd. lb. .37½- —
Triethanolamine, dms., c.l., frt. alld., E. lb. .21½- —
l.c.l., same basis. lb. .22½- —
smaller containers. lb. .25½- —
tanks, same basis. lb. .20 - —
Triethyl citrate, dms. lb. .34 - .36
smaller pkgs. lb. .39 - .45
Phosphate, dms., works, c.l. lb. .38 - —
dms., l.c.l., same basis. lb. .39 - —
tanks, same basis. lb. .37 - —
Triethylamine, dms., c.l., works, basis 100%. lb. .34 - —
l.c.l. works, basis 100%. lb. .36 - —
tanks, works, basis 100%. lb. .33 - —
Triethyleneglycol, dms., c.l., frt. alld., E. lb. .20½- —
l.c.l., same basis. lb. .21½- —
tanks, same basis. lb. .19 - —
Triethylenetetramine, dms., c.l., works, lb. .51½- —
l.c.l., works. lb. .52 - —
tanks lb. .50 - —
Trimethylamine, anhydrous, cyl., works, basis 100%. lb. .29½- .33½
25%-40%, dms., c.l., works, basis 100%. lb. .26 - —
l.c.l., works, basis 100%. lb. .28½- —
tanks, works, basis 100%. lb. .25 - —
Triphenyl phosphate, bbls., c.l., frt. equald. lb. .29 - —
l.c.l., frt. alld. lb. .30 - —
Triphenylguanidine, bbls., works. lb. .75 - —
Tripoli, air-floated, bgs., c.l., works. lb. .0175- —
double-grd., c.l., works. lb. .016 - —
single-grd., bgs., c.l., works. lb. .015 - —
Trisodium phosphate (see Sodium phosphate, tribasic).
Tuba root (see Cube root).
Tungsten metal, powd., 99.9%, dms., works. lb. 4.75 - —
Oxide, kgs., works. lb. 2.85 - —
Turmeric root, Alleppey, bls., Apr.-May lb. .27 - .27½
Haitian, futures, bls. lb. .12 - .12½
Jamaica, futures, bls. lb. .15½- .16
Madras, bgs., May. lb. .22 - .22½
Turpentine, gum (see Naval Stores, Protective Coatings market).
Sulphate, ret. dms., East. gal. .65 - —
tanks, East gal. .40 - —
Wood, dest.-dist., dms. incl., c.l., works, South. gal. .40 - .53
l.c.l., same basis. gal. .41 - .55
N. Y. whse. gal. .55 - —
steam-dist., dms. incl., c.l., works, gal. .58 - —
l.c.l., ex whse, NYC. gal. .63 - .75
tanks, works. gal. .35 - .50

## U

Unicorn root, false (see Helonias root).
True (see Aletris root).
Uranium oxide, black, bgs. lb. 2.55 - —
yellow, kgs lb. 1.65 - —
Urea, dom., 46% N, bgs., c.l., works, ton 75.00 - —
l.c.l., works. ton.78.50 - —
fertilizer compound, 42% N, bulk, c.l., 30 tons, frt. alld. Kan., Neb., N. Dak., Okla., S. Dak., Tex., and east. ton.81.00 - —
40 tons, frt. alld. Colo., Mont., Wyo. and west. ton.90.00 - —
paper bgs., c.l., 30 tons, frt. alld. Kan., Neb., N. Dak., Okla., S. Dakota, Tex., and east. ton.85.00 - —
40 tons, frt. alld. Colo., Mont., Wyo. and west. ton.94.00 - —
Urea-ammonia liquor, A and B, N basis, Belle, W. Va. ton.100.00 - —
C and D, same basis. ton.98.50 - —
Uva ursi leaves, bls. lb. .12 - .13

## V

Valerian root, Belgian, NF, bls. lb. .35 - .37
Indian, bls. lb. .30 - .32
Valonia beards, bgs., ex dock. ton.84.00 -85.00
Cups, bgs., ex dock. ton.57.00 -58.00
Extract, powd., bgs., ex dock, duty extra. lb. .11 - .11½
Vanadium pentoxide, CP, bgs., cns., works. lb. 7.00 - —
tech., dms., works. lb. 1.20 - —
Vanilla beans, Bourbon, tins. lb. 7.50 - 8.00
Mexican, cuts, tins. lb. 5.50 - 6.50
whole, tins lb. 6.35 - 7.35
Tahiti, tins. lb. 4.00 - 4.25
Vanillin, ex eugenol, tins, 25 lbs. lb. 4.50 - —
smaller lots lb. 4.55 - 4.65
ex guaicol, tins, 25 lbs. lb. 3.00 - —
smaller lots. lb. 3.05 - 3.15
ex lignin, tins, 25-lb. lots. lb. 3.00 - —
smaller lots, tins. lb. 3.05 - 3.15
Vinyl acetate, 55-gal. dms., works. lb. .16½- .17¼
5-gal. cns., works. lb. .30 - —
tanks, works. lb. .15 - —
Trichloride (see Trichloroethane).
Vinylpyridin, ret. dms., works. lb. 1.50 - —
Viosterol, bots., 100 billion USP units mill units .04 - —
1 billion USP units. mill units. .05 - —
100 million USP units. mill units. .07 - —
Vitamin A (see Oils, codliver, fishliver).
A concentrate, dms., works. mill. units. .36 - .40
$B_1$ (see Thiamine hydrochloride).
$B_2$ (see Riboflavin).
B complex, natural (see Rice bran and Yeast).
$B_6$ (see Pyridoxin).
C (see Acid, ascorbic).
D (see Oils, codliver and fishliver, Calciferol, and Viosterol).
$D_2$ (See Calciferol).
E (see Alphatocopherol and Oil, wheatgerm).
G (see Riboflavin).
P-P (see Acid, nicotin, and Nicotinamide).
H (see Biotin).
Violet, methyl, toner (see M).
V.M.P. naphtha (see Petroleum naphtha).


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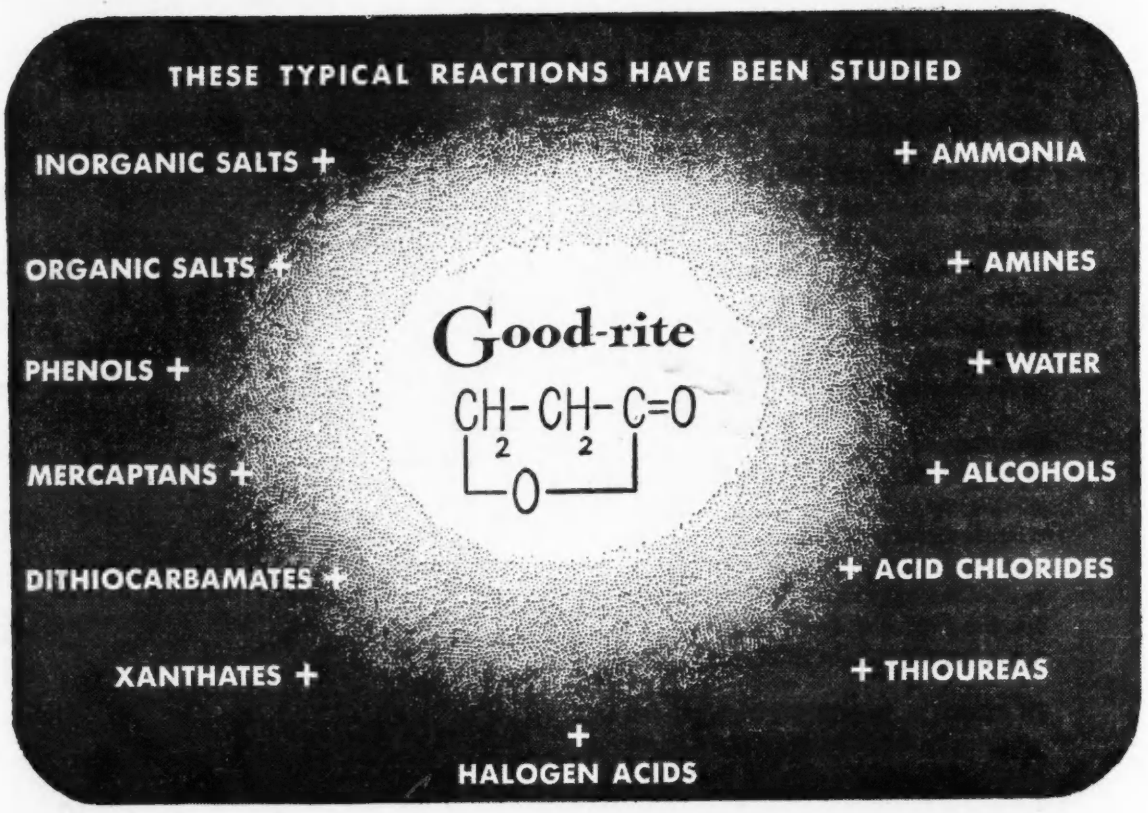
## IN ORGANIC CHEMISTRY

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**B. F. Goodrich Chemical Company** A DIVISION OF THE B. F. GOODRICH COMPANY

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## W

Wahoo root bark, bls.....lb. 2.20 - 2.30
Tree bark, bls.....lb. .55 - .75
Wattle bark, fair average, or E. Afr., bgs., ex dock..ton.$3.00 -$5.00
merchantable, bgs., ex dock..ton.$0.00 -$1.00
extract, liquid, 35% tannin, bbls., works..lb. .08½- —
tanks, works.....lb. .08 - —
solid, E. Afr., 61% tannin, ex dock, duty extra..lb. .09½- —
S. Afr., 62% tannin, ex dock, duty extra..lb. .09½- —
Wax, amorphous (see Wax, microcrystalline).
Bayberry, bgs.....lb. .52 - .53
Bees, bleached, USP, white, bricks, cs..lb. .70 - .73
slabs, bgs. .....lb. .69 - .71
crude, African, bgs.....lb. .58 - .59
Western hemisphere, bgs.....lb. .58 - .59
refined, yellow, bricks, cs.....lb. .61 - .63
slabs, bgs. .....lb. .60 - .62
Candelilla, crude, bgs.....lb. .62 - .63
refined, bgs. .....lb. .65 - .66

Powdered candelilla, 20 mesh, 5c. per lb. extra, 80 mesh, 5½c.; 100-200 mesh, 6c.

Carnauba, chalky, No. 3, bgs., ton lots..lb. .66 Nom.
North Country, No. 2, ton lots..lb. .75 Nom.
No. 3, bgs., ton lots.....lb. .70 Nom.
refined, bgs., ton lots.....lb. .75 Nom.
yellow, No. 1, bgs., ton lots....lb. 1.10 Nom.
No. 2 .....lb. 1.08 Nom.

Powdered carnauba price differentials same as powdered candelilla.

Ceresin, dom., 132°-136° m.p., bgs. lb. .16 - .16½
138°-140° m.p., bgs.....lb. .18 - .18½
158°-162° m.p., bgs.....lb. .22 - .23
Japan, bgs. .....lb. No stocks.
Microcrystalline, 170°-175° m.p., ASTM, amber, ctns., 30 tons yearly contract, group 3 works..lb. .14¾- —
smaller lots, same basis....lb. .15 - .16
black, ctns., 30 tons, same basis. lb. .13½- —
smaller lots, same basis....lb. .13½- .14½
white, ctns., 30 tons, same basis. lb. .25¾- —
smaller lots, same basis....lb. .26 - .27
190°-195° m.p., ASTM, amber, ctns., 30 tons, same basis..lb. .21¾- —
smaller lots, same basis....lb. .21½- .22½
190°-195° m.p., ASTM, black, ctns., 30 tons, same basis..lb. .19¾- —
smaller ctns., same basis....lb. .20 - .21
white, ctns., 30 tons, same basis. lb. .34½- —
smaller lots, same basis....lb. .34½- .35½
Montan, crude, bgs.....lb. .45 - .47
Ouricury, crude, bgs., ton lots....lb. .66 - .67
refined, bgs., ton lots.....lb. .70 - .71
Ozokerite, fabricated, black, 180-190 m.p., bgs..lb. .30 - .33
182-183 m.p., bgs.....lb. .31 - .33
171-172 m.p., bgs.....lb. .27 - .29
white, 178-183 m.p., bgs.....lb. .23½- .24½
170-172 m.p., bgs.....lb. .28½- .29½
Yellow, 180-190 m.p., bgs.....lb. .48 - .50
182-183 m.p., bgs.....lb. .43 - .45
178-183 m.p., bgs.....lb. .26½- .27½
170-172 m.p., bgs.....lb. .28½- .30
Spermaceti, blocks, cs.....lb. .41 - .42
cake, cs. .....lb. .42 - .43
White lead (see Lead, white).
White precipitate, powd., dms., 50 lbs. lb. 2.00 - —
White pine bark, rossed, bls.....lb. .18 - .20
Whiting, limestone, dry-grd., 325 mesh, bgs., 40 tons, St. Louis, works ton.16.00 - —
40 tons, N. Y. whse.....ton.18.00 - —
smaller lots, St. Louis, works.ton.12.50 - —
wet-grd., air-floated, 99% 325 mesh, bgs., c.l.....ton.14.50 -27.50
99% 200 mesh, bgs., c.l....ton. No prices
99% 200 mesh, bgs., c.l.....ton. No prices
water-floated, extra gilders, bgs., c.l..ton.14.50 - —
gilders, bgs., c.l.....ton. No prices
putty grade, bgs., c.l.....ton.13.00 - —
surface treated, bgs., c.l. Ohio works..ton.30.00 - —
Paris white, bgs., c.l.....ton.25.00 -31.00
l.c.l. .....ton.25.00 -29.00
Precipitated, bgs., c.l.....ton.18.00 -20.00
l.c.l. .....ton.22.00 -25.00
Wild cherry bark, thick, bls.....lb. .06 - .07
thin, natural, bgs.....lb. .17 - .18
rossed green, bls.....lb. .24 - .26
Wild indigo root, bls.....lb. .30 - .31
Witch hazel leaves, bls.....lb. .14 - .15
Witherite (see Barium carbonate, natural).
Woodflour, 40 mesh, bulk, c.l., works, East..ton.32.00 - —
l.c.l., same basis.....ton.40.00 - —
60 mesh, bulk, c.l., same basis..ton.37.00 - —
l.c.l., same basis.....ton.45.00 - —
80-100 mesh, bulk, c.l., same basis.. ton.40.00 -45.00
l.c.l., same basis.....ton.50.00 -55.00

Woodflour in bgs. extra, returnable.

Woolfat (see Lanolin).
Wormseed, American, bgs.....lb. .16 - .17
Levant, bgs. .....lb. 4.20 - 4.25
Wormwood, bls.....lb. .40 - .45

## X

Xanthorrhiza root, bls.....lb. .28 - .30
Xylene (see Xylol).
Xylenol, 5°-7°, ret. dms., c.l., works, frt. equald..lb. .21¾- —
l.c.l., same basis.....lb. .22¼- —
tanks, same basis.....lb. .21 - —
45°, dms., l.c.l., frt. equald.....lb. .24 - —
fractions, ret. dms., c.l., same basis. gal. 1.66 - —
l.c.l., same basis.....gal. 1.69 - —
tanks, same basis.....gal. 1.49 - —
Xylidins, mixed, dms.....lb. .42¼- —
Xylol (xylene), coaltar, indust., ret. dms., works..gal. .27 - .29
tanks, E. of Omaha, frt. alld..gal. .28 - .30
W. of Minnequa, Colo., works. gal. .28 - .30
10°, ret. dms., works.....gal. .36 - .38
tanks, E. of Omaha, frt. alld..gal. .31 - .33
6°, ret. dms., works.....gal. .41 - .43
tanks, E. of Omaha, frt. alld. gal. .38 - .40
8°, ret. dms., works.....gal. .45 - .47
tanks, E. of Omaha, frt. alld..gal. .40 - .42

Prices on 3 to 10-degree xylol from petroleum, tanks, delivered (maximum freight allowances in parentheses) are:—Ark., 30c. (2¾c.); Chicago, 30c. (2¾c.); Del.-Md.-D. C., 30c. (2¾c.); Detroit, 30c. (1 8/10c.); La., 30c. (3½c.); N. C. & E. Tenn., 30c. (5c.); N. E., 30c. (2¼c.); N. J., 30c.; N. Y., 30c.; Pa., 30c. (2¾c.); S. C., 30c. (6c.); Va., 30c. (2½c.); W. Tenn., 30c. (3¾c.), and W. Va., 30c. (2¾c.).

## Y

Yara yara, cryst., bots., cns.....lb. 2.25 - —
Yeast, brewer's dry, 50 B units, per gram, dms..lb. .35 - —
90 B units, per gram, dms....lb. .45 - —
200 B units, per gram, dms....lb. .50 - —
300 B units, per gram, dms....lb. .60 - —

Yellow, barium chromate, CP, bgs., l.c.l., dlvd. N. of Tenn. and N. C., E. of Miss., including Davenport, Minneapolis, Rock Island, St. Louis, St. Paul..lb. .32 - —

Barium chromate yellow price diffenentials in other States and city zones are those for chrome yellow below.

Benzidin, bbls., dlvd.....lb. 1.60 - —
Cadmium, CP, all shades, bbls., frt. alld. E. of Rockies..lb. 2.40 - —
Lithopone, all shades, bbls., frt. alld. E. of Rockies..lb. .85 - —

Cadmium yellows, Los Angeles and San Francisco, ex whse. 1c. per lb. higher.

Chrome, CP, bbls., dlvd. N. Tenn. and N. C., E. of Miss., including Davenport, Minneapolis, Rock Island, St. Louis, St. Paul, contracts..lb. .29¼- —

Dlvd. Ala., Fla., Ga., La., (Shreveport), 1¼c. higher; Miss., N. C., S. C., Tenn., Dallas, Tex., 1¼c. higher; Ft. Worth, Tex., 1½c. higher; El Paso, Tex., 2c. higher; Cedar Rapids, Des Moines, Kansas City, Lincoln, Omaha, St. Joseph, 1.6c. higher dlvd. Pac. Coast; for Denver, Pueblo, Salt Lake City, Wichita prices are equalized with Chicago.

Hansa, bbls., same basis as chrome.. lb. 1.60 - —
Primrose, bbls., same basis.....lb. 1.90 - —
Iron oxide, natural, bgs., c.l., works. lb. .01¾- .02¾
l.c.l., works.....lb. .01¾- .03¾
French type, bgs., c.l.....lb. .04½- —
l.c.l. .....lb. .04¾- —
Peruvian type, bgs., c.l.....lb. .0185- .0210
synth., bgs., c.l., works.....lb. .09 - —
l.c.l., works.....lb. .09¼- —
Yellow, mercury oxide, bbls., 1,000 lbs. lb. 1.93 - —
smaller lots.....lb. 1.95 - —
Ocher, American, golden, bgs., works. lb. .01¼- .02½
Zinc, bbls., same basis as chrome..lb. .21 - —
Yellow dock root, bls.....lb. .25 - .27
Yellow xanthorrhiza (see Xanthorrhiza).
Yerba santa leaves, bls.....lb. .40 - .45
Yohimbine hydrochloride, vis.....oz. 3.25 - 4.00

## Z

Zein, bgs., 1,000 lbs., works.....lb. .23 - —
smaller lots works.....lb. .30 - —
Zinc acetate, tech., bbls., dms.....lb. .20 - —
NF, dms. .....lb. .39 - .40
Arsenite, bgs., c.l., frt. alld. E. of Rockies..lb. No stocks
l.c.l., same basis.....lb. No stocks
Carbonate, tech., rubber makers', bbls., works. lb. .10¾- .11¾
USP, precip., powd., bbls.....lb. .35 - —
dms. .....lb. .40 - —
kgs. .....lb. .37 - —
Chloride, tech., fused, dms., c.l., works..100 lbs. 6.25 - —
l.c.l., works.....100 lbs. 6.65 - —
gran., bbls., c.l., works..100 lbs. 7.00 - —
l.c.l., works .....100 lbs. 7.40 - —
solution, 50%, dms., c.l., works.lb. .0365- —
l.c.l., works.....lb. .0425- —
tanks, works .....lb. .0300- —
USP, gran., dms.....lb. .30 - .31
jars .....lb. .35 - .36

### Wahoo Root Bark—Zinc Oxide

Zinc chromate (see Yellow, zinc).
Cyanide, kgs., works.....lb. .35 - .39
Diethyldithiocarbamate, dms., works. lb. 1.15 - —
Dust, bbls., c.l., dlvd.....lb. .1250- .1260
l.c.l., dlvd. .....lb. .1275- .1300
Fluoride, bbls., works.....lb. .18 - .19
Hydrosulphite, dms., works.....lb. .16 - —
Iodide, NF, jars.....lb. 4.05 - —
Laurate, bbls.....lb. .45 - .46
Linoleate, solid, 9½% bbls.....lb. .51½- —
Metal slabs, E. St. Louis.....lb. .12 - —
Naphthenate, liquid, 8% Zn, dms., dlvd..lb. .21½- —
Oleate, bbls.....lb. .42½- —
Oxide, pigment, dom., acicular, bgs., c.l., ship't point, frt. alld..lb. .11 - —
l.c.l., works.....lb. .11¼- —
American process, com'l lead-free, bgs., c.l., ship't point, frt. alld..lb. .11 - —
l.c.l., works.....lb. .11¼- —
leaded, 5%, bgs., c.l., ship't point, frt. alld..lb. .11 - —
l.c.l., works.....lb. .11¼- —
35%, bgs., c.l., ship't point, frt. alld..lb. .12¾- —
l.c.l., works.....lb. .12¾- —
60%, bgs., c.l., ship't point, frt. alld..lb. .13¾- —
l.c.l., works.....lb. .13¾- —
French process, com'l, lead-free, bgs., c.l., ship't point, frt. alld..lb. .13¼- —
l.c.l., works.....lb. .13¼- —
green, seal, bgs., c.l., ship't point, frt. alld..lb. .12¾- —
l.c.l., works.....lb. .13 - —

—Continued on page 78


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## *Paint from Petroleum*

The introduction of a new-type, oil-less varnish, derived from petroleum, is attended by possibilities of a consequent effect upon the production of protective coatings as revolutionary, at least, as that of the cellulosic lacquers. The general economic significance of the new coating is far broader. It is not necessary to be filled with figures of statistical import or gifted with an oversize imagination to conceive what would result from the emancipation of varnish-making from dependence upon fatty oils with at least a fair degree of natural drying properties. The effects of synthetic resins on the national economies resting more or less upon natural varnish gums fall far short of comparison. Linseed oil and tung oil are not without national economic significance in some parts of the world.

The immediately arising argument that it is not economically wise to draw upon petroleum for protective coatings further than it contributes, especially in solvents, today is not so weighty as it may at first appear with reference to the new intrusion of the ancient areas of varnish-making. In the first place, the fraction of petroleum refining which contributes the new varnishes is not highly essential to the adequate production of internal or open combustion fuels. Furthermore, both the glycerin and the allyl components of the new material can be produced from annually replaceable raw materials.

Much talk there has been in technical circles over several years past about what the chemists and allied scientists of the petroleum industry were getting ready to do to the ancient method of oxidizing fatty oils to form protective coating films. Now comes their first move. If some others of which they talk come along, the whole process of applying, as well as making, protective coatings will be revolutionarily modernized.

## *Transportation Trust Legalized*

Congressional overriding of the presidential veto of the bill to exempt concerted fixing of transportation rates from the application of the antitrust laws is, doubtless, the greatest jumble of politicomics emerging from a congressional session of which that "science" was predominantly characteristic. The overriding of that veto upsets almost every rule of policy in the interrelations of governmental agencies and the relations of government and business. In plain words, it stinks with favoritism.

Apparently the insistence upon the enactment of the law to set common carriers outside the antitrust laws rested upon somebody's private peeve against the Department of Justice—as much as that was quite plainly intimated in some of the discussions of the measure. When such influences can successfully set the "furtherance of the national transportation policy"—as the bill phrases it—above the public welfare, representative government has failed.

Congress continuously bewails the alleged fact that some one or another administrative office is encroaching upon its powers, is usurping its prerogatives of legislating. Now it puts the Interstate Commerce Commission above its legislation and above the judicial application of the law of the land. And because its enactment fails to provide adequate, if any, means for the commission to deal with secret agreements or progressive concerted action, it puts the organizations of common carriers, if not mere groups of individual concerns, above the commission. Syndicalism could depart no farther from democracy.

When one recalls and considers the large part that rebates and other favors in railroad freight rates had in the genesis and early enforcement of the antitrust laws, the jumble of exempting such rates and others from a policy of competition becomes more complex. Certainly, if Congress were minded to ease the proscriptions of the antitrust laws, it should apply a better sort of selectiveness in its setting up of exemptions. In making special beneficiaries of common carriers it has opened the door wide for a parade of other interests which can adduce comparable pressure. Certainly every other industrial group is entitled to no less consideration.

The freeing of common carriers from all legal obligation to engage in free, open competition is on all fours with the earlier exemption of labor organizations from the requirements of the laws against concerted action against the general welfare. Half a dozen boards and other agencies have been set up to exercise some sort and measure of control against the misuse of that favor. They have not been very effective. Anybody who expects the Interstate Commerce Commission to prevent the blackjacking of the public, in "furtherance of the national transportation policy," has learned nothing from experience.

## *Consider the Vegetable 'Cow'*

History provides few, if any, examples of a worse manifestation of misrepresentative government than that which has attached to the endeavor of those opposed to syndicalistic favoritism to get Congress to repeal the Federal taxes on oleomargarin. The obstructive tactics in committee and on the floor in the house were deplorable in a nation that likes to look upon itself as a free democracy; but, the obstacles laid in the way of senate concurrence in spite of the obvious, favorable sentiment of the majority, are such as to provide potent weapons for those who are intent upon proving to the world that democracy does not properly serve its people.

The situation provides more than a little food for thought on the wisdom and feasibility of the vegetable oil division of agriculture's engaging in an equally ruthless economic warfare against the embuttered farmers of dairydom. One first big blow could be dealt by refusing to furnish any oilseed meal as food for the production of milk. The public need not suffer. The providing of a fully satisfactory replacer of cow's milk, in a nutritional way, by combining vegetable fats, vegetable protein, vegetable sugar, vegetable dispersing agent, and vegetable flavoring is a relatively simple task for applied physicochemistry. The larger part of lactic acid is already obtained from vegetable sources.

In a way, such a new industry would fit very well into the long-established and more recent industrialization of the edible vegetable oil regions. The waste liquor from sulphite paper processes is a very good agent for the recovering of protein from the grain residue of alcohol distillation. Gliadin and glutenin are no less of nutritive value than is lactic casein. The long work of the Chinese on making a milk from soybeans is quite enlightening. Study of that matter by Ford was not abandoned because of impracticability. The findings there are full of usefulness, as well as promise in the direction of both production and price.

To send the cow as a working provider of food into the limbo of the ox as a working provider of power is attended by no big problems.

## *Washington Talks It Over*

—*Continued from page 5*

congestion, indifferent labor, plus restrictive union rules.

This would all be overcome by the new service by pooling deliveries and thus permitting multiple deliveries per stop. Furthermore, the concern offering the service will handle drugs, medicines, hospital supplies, etc., exclusively, and for that reason probably will be allowed to operate during the frequent truck strikes that occur in New York. More detailed information on the service can be had from B. F. Williams, chairman of the transportation section, who has been wrestling with the problem for the past two years.

### ECA Promise Viewed Skeptically

Operations of the Economic Cooperation Administration are to be conducted as in a goldfish bowl. That is the promise of Howard Bruce, deputy ECA administrator, who said that it was the intention of his agency to apply security classifications as sparingly as possible. "Security classification" is the term mostly employed in the government nowadays to mean "not for publication."

The newspaper fraternity is taking this pledge with a grain of salt. Almost every agency that has been set up has made similar pledges which haven't worked out as expected. The usual result has been that the agencies issue a flood of releases that only tell half the story and when the newsmen try to dig behind them for more detail they find the information classified.

The old rule of government of withholding only that information which would reveal a trade secret appears to have gone by the board and every thing is viewed now from the standpoint of "security" with some peculiar constructions on that term.

### Industrial Radio Services Rules

The Federal Communications Commission is planning to throw out all its current rules governing utility, geophysical, special press and intermittent radio services, and set up a new series of rules for industrial radio services. Radio services are becoming of greater importance to industry every day and the new rules will be of interest to chemical and allied industries.

The first of the new rules will be for power radio service in which authorizations will be issued to persons engaged in generating, transmitting, collecting, purifying, storing, or distributing by means of wire lines or pipelines, electrical energy, artificial and natural gas, water or steam for use by the public. The second set of rules are for petroleum radio service covering radio facilities for persons engaged in prospecting for, producing, collecting, refining, or transporting petroleum products, including natural gas.

A third set of rules are for the lumber industry, and a fourth set will cover persons engaged in commercial or industrial operations which are predominantly rural in nature, as, for example, persons engaged in farming, ranching, irrigation, mining, and construction activities. All other commercial interests will fall under another set of rules for low power radio communication systems.

Persons interested in the rules should submit their written comments to the commission before July 12. If necessary the commission will hear oral arguments.

### ERP Fertilizer Program Drawbacks

When the farmers in the southeast get around to reading the provisions of the appropriation bill for the European Recovery Program they are not going to be too well pleased over the way Congress handled the fertilizer problem. At least that is what some of the people in the industry say who were following the proceedings closely.

The loudest complaints about the shortage of nitrogen have come from the southeast. It was only a month ago that a big group paraded before the house agricultural committee to air their complaints. Congress, in its wisdom, endeavored to placate the farmers by cutting back on the amount of nitrogen that the commercial producers would have to send out of the country by saddling half of this burden on the Army. This means that about 30,100 more tons of nitrogen will be available for fertilizer than otherwise might be expected this year.

But the real measure of relief goes to the West Coast states. Congress also provided that 10 percent of the Armys' anhydrous ammonia production is to be made available to the ammonium sulphate producers who have either shut down or face a shutdown, and it is in this area that this condition exists. Ten percent of the Army's anhydrous ammonia production means between 120,000 and 125,000 tons of sulphate of ammonia, most of which may go to the West Coast.

The industry itself isn't too well pleased over the situation because it is feared that some of this West Coast ammonium sulphate may find its way back to the east and upset the market.

### Food and Fertilizer Allocations

The IEFC programs of world allocation of scarce basic food commodities and nitrogenous fertilizers may start to fold up sooner than expected. It is a definite fact that there is a growing desire among the thirty-six nations participating in the programs to get out from under the restrictions, indicating that world food conditions are improving and that nations want more freedom in buying and selling their products.

IEFC is now querying the governments on their feelings about the programs. It is asking for replies by July 15 on whether they consider it desirable to continue the system of international allocation recommendations either for foods or for nitrogenous fertilizers for 1948-49, and what specific modifications in the existing system or procedures would be desirable to make international cooperation more effective and more realistic.

While the replies are to be returned by the middle of next month and relate to the programs of 1948-49, it isn't to be expected that the program on nitrogen will be dropped. The sixteen nations making up the fertilizer committee have already indicated their desire for continuance of nitrogen allocations at least for another year, and it is hardly to be expected that they will change their minds. In fact, the 1948-49 nitrogen fertilizer allocation program may be announced momentarily. The committee held what was scheduled to be its final meeting last Friday.

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# Heavy Chemicals

An advance in prices for zinc sulphate last week resulted in a higher index number for general chemicals. The current figure is now 209.5 against 208.7 for the preceding week and 199.3 for the corresponding week a year ago. Higher freight rates and increased costs of metal and labor were responsible for the upward price revision of zinc sulphate. Sodium thiosulphate was also higher. Carbon tetrachloride will be advanced on July 1 and the zoning system will be changed to eastern and western areas. Iron chloride technical anhydrous and sodium sulphydrate will also be revised upward at the turn of the month. Negotiations to end the strike at a large alkali producing plant in Ohio have not resulted in a settlement. The prolonged strike has prevented a sizable amount of tonnage from being distributed and temporarily checked the trend toward easement of stocks in chlorine, calcium chloride, caustic soda and soda ash.

United States production levels of important inorganic chemicals were generally lower for April than those reported for March but higher than for April, 1947, according to the Bureau of the Census. Of the 35 chemicals included in the Bureau's monthly survey, 24 were produced in smaller volume and nine in larger volume during April than during March, while 24 were produced in larger volume and 10 in smaller volume than during April, 1947. Of the "heavy volume" chemicals, production gains were reported only for sodium sulphate. Decreases ranging from 1 to 16 percent occurred for synthetic ammonia, ammonium nitrate, calcium carbide, chlorine, muriatic acid, nitric acid, phosphoric acid, manufactured soda ash, caustic soda, and sulphuric acid.

Eleven wholesalers of industrial chemicals reporting to the Bureau of the Census aggregate sales of $1,167,000 in April showed a gain of 9 percent over March. Six wholesalers showed a loss of 7 percent in inventories from the preceding month. In comparison with April, 1947, their sales were up 14 percent and their inventories were up 8 percent.

Paper production based on a percentage of six-day capacity was 95.3 percent for the week ending June 19, according to the American Pulp and Paper Association. This compares with 95.0 in the preceding week and 106.1 for the corresponding week in 1947.

*Production figures appearing below unless otherwise designated are from the Bureau of the Census, Department of Commerce. Export figures are from the Department of Commerce.*

**Ammonia, Anhydrous**—Heavy demand and the loss of tonnage from a strikebound plant have resulted in a tight supply situation. Production of synthetic in April was down to 92,640 tons, compared with 100,142 tons in the preceding month and 93,007 tons in April, 1947.

**Calcium Carbide**—Production of commercial in April amounted to 57,649 tons, compared with 61,489 tons in March and 51,830 tons in April last year. Stocks at present about flush with demand for domestic use.

**Carbon Dioxide**—April output of liquid and gas was below that recorded in March. The total in April amounted to 19,545,000 pounds, compared with 20,511,000 pounds in the preceding month and 17,021,000 pounds in April last year. Output of solid, dry ice, was 63,715,000 pounds in April, against 50,079,000 pounds in March and 64,309,000 pounds in April, 1947.

**Carbon Tetrachloride**—Higher prices will be named for this chemical on July 1. The adjustment averages an advance of ½c. per pound. The zone system will be revised to an Eastern and Western area, the former representing East of the Rocky Mountains and the Western including Arizona, Idaho, Oregon, Utah, Washington and parts of Montana. The current market situation shows that some suppliers are a little short against contract requirements while others are about on even beam.

**Chlorine**—Supply situation did not change much last week. Demand during the month has averaged steady with some increase in shipments to water works. There is still a shortage of cylinders with no nearby easement in sight. Tankcars were not as free in this section as in others. An Ohio producing plant has continued strikebound. Production in April amounted to 126,992 tons of chlorine gas, compared with 132,668 tons in March and 109,050 tons in April, 1947. Exports during the first quarter totaled 5,420,000 pounds, compared with 2,850,000 pounds for the corresponding period last year.

**Copper Sulphate**—Expansion in the blight covering areas from Maine to the Virginias has greatly accelerated the demand for copper sulphate, particularly for the grades necessary for dusting and spraying. Producers are said to be running at capacity and shipments have been heavy. The demand has been mostly for immediate delivery and it is estimated that the stockpile has been reduced about 50 percent in the past four weeks. The industrial demand is also heavy and has been maintained at wartime levels. Export sales for Latin America have shown improvement and the outlook is considered more encouraging. March exports totaled 8,823,000 pounds, of which 3,593,000 pounds was destined to Austria. First quarter shipments were 19,035,000 pounds, a decline of 10 percent from the corresponding period in 1947. In both periods Central America was the principal buyer.

**Iron Chloride**—Technical anhydrous will be advanced 50c. per 100 pounds on July 1. Carlots will be priced at $5.75 and less than carlots at $6.50 to $7.50 per 100 pounds f.o.b. the works.

**Nickel Sulphate**—Continued to find an active outlet under a steadily increasing demand for plating use. While most producers have been able to meet requirements, pressure for shipments has exceeded output in some instances and the movement has been slightly behind contract schedules. No change in prices was indicated.

**Potash, Caustic**—Producers have improved their position in this chemical although the supply is not flush with demand in all forms. Dry material as previously stated is in shorter supply than the liquid. No price changes have been announced. Exports for the first quarter amounted to 6,355,000 pounds, against 3,020,000 pounds for the same period in 1947.

**Potassium Carbonate**—Supply condition has not improved as much as caustic potash. It was stated in some supply sources that demand from the glass factories was not as urgent as noted earlier in the year but inquiry from other consuming industries had increased. Like caustic potash, the dry forms are in shorter supply than the liquid at present.

**Soda ash**—Supply situation at the close of the month was described as tight. Negotiations regarding the settlement of the labor difficulties at a large producing plant in Ohio did not result as favorably as had been expected and the continued cutback tonnage from this plant has contributed toward checking easement in the present market condition. April production of finished light ash amounted to 177,047 tons, against 202,795 tons in the preceding month and 175,824 tons in April, 1947. Output of finished dense ash in April was 120,806 tons, compared with 134,765 tons in March and 131,850 tons in April, 1947. Production of natural was 26,288 tons, against 23,896 tons in March and 22,991 tons in April last year.

**Soda, Caustic**—June has occasioned no easement in the supply position of caustic soda. The loss of tonnage resulting from the continued shutdown of a large Ohio producing plant has added tension to a tight market situation and prevented suppliers from gaining on their short-shipped contracts. Official figures from the Census Bureau record a drop in April production and another decrease is expected in May. The April total by the electrolytic process was 124,002 tons of liquid and 20,732 tons

*For Late Market Developments, See Page 4*

## *Market Trends*

**Prices Advanced**

Sodium thiosulphate, 15c. per 100 lbs.
Zinc sulphate, 50c. to 75c. per 100 lbs.

**Prices Reduced**

None

**Comparative Price Indexes**

(100=August 1, 1914)

*General Chemicals*

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 209.5 | 208.7 | 208.0 | 199.3 |

*Acids*

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 119.9 | 119.9 | 119.9 | 119.3 |

*(For Current Prices see Page 9)*

of solid against 130,292 tons of liquid and 24,297 tons of solid in the preceding month.. Production by the lime-soda process amounted to 62,298 tons of liquid and 19,013 tons of solid in April, compared with 68,366 tons of liquid and 21,982 tons of solid in March.

**Sodium Bicarbonate** — Market situation has been brought into a satisfactory state of balance during the past month with demand and supply about on even beam. Production during April is placed at 12,596 tons, campared with 14,698 tons in the preceding month and 16,727 tons in April, 1947. Exports for the first quarter of this year were 12,268,000 pounds, against 7,908,000 pounds for the same period in 1947.

**Sodium Chlorate** — Buying interest of substantial dimensions has featured the market throughout the month of June. Production has been heavily sold through the Summer months and September for agricultural and industrial uses. October apears to be about the best that producers can offer. There is no change in contract prices.

**Sodium Phosphate** — Production of monobasic in April was down to 781 tons, against 1,194 tons in March and 1,090 tons in April last year. April output of dibasic was 7,045 tons, compared with 8,546 tons in the preceding month and 5,539 tons in April, 1947. Tribasic production in April amounted to 6,116 tons, against 6,345 tons in March and 5,540 tons in April last year.

**Sodium Thiosulphate** — Priced higher with carlots held at $2.90 to $3 per 100 pounds in bags and at $3.30 to $3.40 per 100 pounds for smaller quantities works, depending upon the seller. Pea crystals are held at $3.30 per 100 pounds in bags for 5,000 pounds or over delivered in the Metropolitan area.

**Zinc Sulphate** — An advance in prices was recorded in this market last week. The upward revision did not come as a surprise to the trade as producers have been absorbing the increased costs of labor, metal and transportation for several months. Monohydrate in bags, carlot shipments is now $7.60 per 100 pounds and less than carlots $8 per 100 pounds delivered. Crystals are priced at $4.65 per 100 pounds in bags, carlot shipments and $5.05 per 100 pounds for bags f.o.b. the works and flaked is held at $5.15 per 100 pounds in bags, carlots and $5.55 per 100 pounds for less f.o.b. the works.

## Acids

**Hydrofluoric** — Production in April amounted to 5,491,000 pounds, compared with 5,469,000 pounds in March and 4,472,000 pounds in April last year. Stocks have been maintained at a level to meet requirements promptly and the market has shown a satisfactory degree of balance throughout the past month.

**Muriatic**—Stocks meeting requirements promptly. Output in April was slightly lower at 36,306 tons, compared with 36,579 tons in the preceding month and 34,637 tons in April a year ago.

**Nitric**—April production dropped about 7,000 tons to a total of 94,906 tons, against 101,041 tons in March and 64,288 tons in March, 1947. Stocks not excessive at present but sufficient to meet the current extent of industrial demand.

**Oxalic**—No appreciable improvement in supply conditions could be noted during the month of June. Producers are shipping all the material possible to regular consumers but have not been able to meet contract schedules. The market situation is tight and firm with prices tagged for higher levels on July 1.

**Sulphuric** — Output dropped rather sharply in April. Gross production was 896,337 tons including 253,727 tons made by the chamber process and 642,610 tons made by the contract process. Total production in the preceding month was 956,957 tons and in April, 1947 output registered 865,447 tons. Immediate and prompt shipments remained available during the month.

## Non-Ferrous Metals

**Copper**—Price tendency has continued firm throughout the month of June under a steady demand from domestic consuming industries. Export sales have been moderate on the basis of 21½c. per pound f.a.s. Scrap prices were higher at the close of the month with advances of ¼c. to ½c. per pound registered bringing the market to 15c. to 15¼c. per pound for number 1 grade.

**Lead**—Average daily rate of lead output from domestic mines in April rose to the highest level in four years, according to the Bureau of Mines. Not since April, 1944 when daily output averaged 1,258

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tons have United States mines produced lead in excess of the 1,177 tons per day average in April, 1948. For four consecutive months the daily average output of recoverable lead from domestic mines has been increasing and production in April advanced to within 23 percent of the 1,534-ton average daily wartime peak output established in February, 1942. April lead production totaled 35,319 short tons compared with 35,802 tons in March. Continued heavy demands for lead from consumers and a higher price for foreign metal boosted the domestic lead price on April 5 to a new all-time high of 17½c. per pound, New York. Although several months will be required before mine output will reflect fully the 2½c. per pound gain over the previous record price of 15c. established on March 3, 1947 it is probable that the increased April production may be due in part to the new quotation. Such a probability is suggested upon review of the April output figures of the various important lead-producing areas. In the states east of the Mississippi River output jumped 39 percent over the March production and 58 percent over the monthly average in 1947 due largely to increased lead output in Virginia. The combined production of lead in Arkansas, Kansas, Missouri, and Oklahoma totaled 13,136 tons in April, 3 percent greater than the monthly average in 1947 and virtually equal to the 1946 average monthly output. In the combined Western states April production was 20,997 tons, a slight gain over the average daily output in March, and the greatest average daily production since June, 1942.

**Silver**—No price changes were noted during the month. The official closing in New York for silver bullion was at 74⅝c. per ounce.

**Silver Bullion Price Range**

| | Per ounce | |
|---|---|---|
| | New York | London |
| High | Jan. 2, 1948—74⅝c. | Jan. 2, 1948—45d. |
| Low | Jan. 2, 1948—74⅝c. | Jan. 2, 1948—45d. |

**Tin**—Advices from the Netherlands East Indies state that shipments of tin ore in April totaled 3,088 tons, compared with 2,966 tons in March. Holland is reported to have taken 1,733 tons of the April shipments and the United States 1,315 tons. Exports for the first four months are placed at 10,058 tons against 16,280 tons for the entire year of 1947.

Government operation of the tin smelter at Texas City, Tex., for two more years has been approved by the Senate which passed a compromise bill previously agreed to by the House and sent it to President Truman for signature. The Senate originally voted a five-year extension of Government operation of the tin smelter beyond June 30, 1948, but the House reduced this to one year. A Senate-House conference finally agreed upon two years.

**Zinc**—Geological Survey has released a preliminary map of the Kokomo (Tenmile) mining district of Colorado. This district, which is part of an extensive mineralized area of north-central Colorado, has in the past yielded a substantial quantity of base metals, chiefly lead and zinc, and during

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World War II it again became an important source of metals. The map shows the distribution and structure of the rocks, including the lime-stone beds—the principal ore zones of the area. Some of these beds provide a key for prospecting. This new map supersedes earlier maps released in 1944 and 1945, bringing them up to date as of March, 1948 and adding over 18 square miles of recently mapped territory. Copies of the map have been placed in open file in order to make the most recent information on the area immediately available to those interested. The map, in two sheets, may be inspected in open files at the offices of the Geological Survey, Rooms 1033 (Library) and 4212 Federal Works Agency Building, Washington, D. C.; Room 230 New Customhouse, Denver, Colo.; and Room 12, Building 12-B, Federal Center, Denver, Colo.

## Sherwin-Williams Making New Insecticide Material

An insect killer, said to be more potent than DDT, has been placed on the market by the Sherwin-Williams Company. The material, known as "Halodane 40 percent Wettable," acts as a stomach poison, a contact poison and as a fumigant. It is said to be deadly to both household and agricultural pests. The manufacturer reports that the product has no unpleasant odor and provides a persistent, active residue which is water resistant. It is said to kill ants, cockroaches, bedbugs, spiders, firebrats, grasshoppers, crickets, alfalfa weevil, thirps, leaf miners, Japanese beetles, wireworms, ticks, lice and wool maggots.

## Sulphur Mine Production Started by Texas Gulf

The new sulphur mine of the Texas Gulf Sulphur Company at Moss Bluff, Texas, has started production. The mine is situated about fifteen miles from Liberty on the Trinity river. It will be necessary to accumulate stocks before shipments can be made. It is expected that barges will carry the sulphur to Galveston, where it will be loaded into vessels.

## Gallowhur Chemical Making New Emulsifiers, Detergent

Gallowhur Chemical Corporation has introduced a complete new line of emulsifiers and a new synthetic liquid detergent for sanitary use, according to Steve J. Post, sales manager. The emulsifiers, for chlordane and toxaphane, will be marketed under the trade name "SKIL" and the detergent will be called "L-6."

## Buffalo Rubber Group Plans Picnic, Meetings

The Buffalo Rubber Group, Buffalo, N. Y., will hold its annual picnic at the Lancaster Country Club on July 31. Other dates scheduled by the group include meetings at the Westbrook hotel on September 21 and October 19, and the organization's annual Christmas party on December 14.

### Bemis Bro. Oregon Plant Not to Resume Operation

Bemis Bro. Bag Company, St. Louis, Mo., does not plan to reopen its plant at St. Helens, Ore., which was recently closed by floods in that area. The plant was scheduled to suspend operations when the company's new facility at Vancouver, Wash., is completed in July, and delivery schedules in the St. Helens area will be maintained from plants at San Francisco, Wilmington, Calif., and Peoria, Ill.

### Fertilizer Needs of Austria For January-June Estimated

Fertilizer requirements of Austria for the first six months of 1948 have been placed at 60,000 metric tons, excluding nitrogenous fertilizers, according to a report from that country. The total includes 25,000 tons of superphosphate, 25,000 tons of potash and 10,000 tons of basic slag.

## *Trade Briefs*

**National Security** Resources Board has appointed Charles Schwarz director of information.

**French Chemical Company**, Winchester, Ky., has changed its name to French & Gilbert, Inc.

**Cincinnati Chemical Works**, Inc., Cincinnati, Ohio, has begun construction work on a research center and administration building in that city.

## Pyrene Names Boucher As General Manager

Pyrene Manufacturing Company, Newark, N. J., has appointed George H. Boucher vice-president and general manager. Mr. Boucher, who was recently elected to the company's board of directors, had previously been vice-president in charge of sales. He joined the company in 1929 as advertising and sales promotion manager.

### Corrosion Test Results Shown by Standards Bureau

The National Bureau of Standards has placed on exhibit approximately 3,000 actual test specimens of various type pipe materials that were used in different types of soil. Chemists, metallurgists, corrosion engineers and others interested in the behavior of materials underground have been invited to inspect the samples. They are on display at the bureau's underground corrosion laboratory, Connecticut avenue and Van Ness street, N.W., Washington, D. C. They will be shown until August 15.


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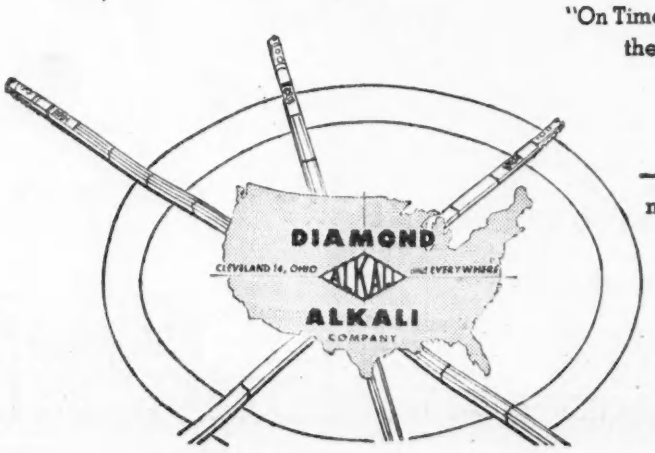

# *National Fertilizer Association*

—*Continued from page 5*

tilizer manufacturers have large opportunities to determine the type of fertilizer used, said Weller Noble in his address as chairman of the executive committee. They would find it good business, he added, to promote more concentrated mixtures. The trend in that direction was indicated by the fact that an increase of 2 percent over 1935-39 in tonnage use in 1947 represented an increase of 12 percent in plantfood content. The latter year's consumption aggregated about 16,539,000 tons, including 1,500,000 tons of crude phosphate rock, basic slag, gypsum, and so on. The fertilizer industry is in position to render the best service of its history, Mr. Noble said, and the part of the association in that condition had been important. Its program should include still more attention to public relations, and plans for the dissemination of more and more educative data are under way.

The addition of Dr. Malcolm H. McVickar to the association's staff as agronomist was reported by Mr. Noble. He told also of the launching of "Pasture Notes" in new, printed form, the progress in the preparation of a color motion picture on fertilizer manufacturing, and a new booklet, "What's in a Bag of Fertilizer," designed to explain the role of fillers. The meeting last spring with TVA officials was mentioned by Mr. Noble. No definite stand has yet been taken by that agency on the association's request that its products be made available otherwise than through cooperatives and to manufacturers of mixtures. Freight rates continue to offer a problem to which the office staff must give much attention. Some increases have led to higher costs to farmers.

Mr. Noble expressed his opinion that conventions were essential to the survival of the association because they afford a means of acquainting the members with its services, they present opportunities for various educational presentations, and they, most importantly, contribute to helpful friendliness.

Work of the directors and the office staff was commended by Mr. Noble, who spoke particularly in appreciation of the services on the board of the veterans, H. B. Baylor, Robert S. Cope, James W. Dean, and C. D. Shallenberger. Mr. Baylor, who is retiring from business, was made an honorary life member of the association. His place on the board has been taken by Maurice H. Lockwood, recently president of the association, who will succeed Mr. Baylor in the latter's business position.

**Economic Considerations**

An illuminative statistical picture of the national economy and the general business outlook was given by A. L. M. Wiggins, United States Under-Secretary of the Treasury. Mr. Wiggins, a businessman turned bureaucrat in job but not in philosophy—as he stated it—stressed the importance of food as a factor in world affairs. He declared that only food could assure the recovery of adequate productive effort and that ample food was the best insulation against the spread of Communism. The contribution of the fertilizer industry of the United States to the successful meeting of the food problems of the world was most important, Mr. Wiggins said, and he was confident that it would be forthcoming.

Conditions now are not like they were after World War I, and Mr. Wiggins did not expect similar economic failures, sharp price declines, or other depression characteristics. International politics is now a special influence. Essential military preparedness will provide industrial supports. The bigger role of government in the national economy excludes many weaknesses which undermined private business in the early 20s. The fact that government's is 60 percent of the outstanding securities against 11 percent then, leaves private business less exposed. It also demands that government keep the cost of money at a fixed, low rate; hence speculation cannot reach the scope of the years after World War I.

Assets and assurances cited by Mr. Wiggins to support his belief that no depression was in sight included the increase of individual liquid assets from $50,000,000,000 in 1940 to $200,000,000,000 now; the growth of agricultural wealth until its nonreal-estate ratio to liabilities is 16 to 1, with a net worth of $103,000,000,000 against $43,800,000,000 in 1940. He refuted charges of excessive corporate earnings by quoting the 1919 net profit at 8.1 percent of the national gross product and that for 1947 at 8.2 percent—there was an overall deficit in 1921, he said. In 1920, public debts in all were 20 percent of the total indebtedness of the nation; today it is 60 percent.

So, money stabilization is certain, and as he sees it, the basic elements of financial and economic strength can support prices and business quite firmly if prices are not allowed to get out of hand. Mr. Wiggins saw every reason to face the future with far more confidence than was justified in 1920, and he declared that the fertilizer industry, particularly located between agriculture and manufacturing, faced an era of great opportunity—unless sound economic judgment were discarded.

**Genesis of Plant Nutrients**

A practical demonstration of the chemistry of the adaptation of elemental nitrogen, phosphorus, and potash, and a number of minor elements, to the nutrition of plants was given by Dr. H. B. Siems, of Swift & Co., chairman of the plantfood research committee. Garbed as a "cook" and working at a well-equipped laboratory bench, Dr. Siems told how nitrogen from the air becomes ammonia and, with the aid of a heated platinum wire catalyst, he oxidized ammonia B liquor into nitric acid. Then he told how the vitrates are made. He also demonstrated the formation of a solid condensation product by mixing a solution of urea and a solution of formaldehyde.

Passing to phosphorus, Dr. Siems exhibited red and yellow forms of the element in sealed tubes and, lighting a piece, demonstrated the production of $P_2O_5$. He also made a solution of condensed $P_2O_5$ "fumes" in water, and mixed this with a solution formed by fireball skipping bits of potassium on water—and he drank the resulting "phosphate." He exhibited some metallic potassium, but made it clear that it could not be used as a nutrient application to plants.

The production of lime by mixing metallic calcium with water was also demonstrated. A ribbon of metallic magnesium was burned to make magnesium oxide. A penny was treated with acid to show how copper salts are produced. Sulphur was fired as a hint of the process of making sulphuric acid for sulphates and superphosphate. Granular zinc also was given an acid treatment, and the small but important plantfood roles of iron and boron were told, specimens of each being exhibited. Dr. Siems made it clear that no element can be used in full purity as a food for plant or animal, but all can easily be transformed to assimilable compounds. The minor elements he characterized as largely catalytic in their plantfood roles, demonstrating such a role by showing that a lump of sugar, which could not be ignited with a match, was readily set aflame when a bit of cigaret ash was put on it, the potassium carbonate in the ash making the carbohydrate compound ignitable.

**Land-Use Programs**

Conservation of the soil gets little public attention, said Dr. Robert E. Yoder, of the Ohio Agricultural Experiment Station, telling about the land-use program of that State, but its neglect is a failure of civic responsibilities. Land resources, he declared, have always been the foundations of nations and the survival of a people even today requires wiser use of those resources. The fertilizer industry owes it even to itself to promote such use and the development of intelligent land management to combat the exhaustion of fertility.

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creasing fertility balance in the State, losses from erosion which have ruined 16 percent of its soil, and unwise cropping. It aims at a crop pattern with less row crops and small grains and more hay and other rotating sods and some more permanent pasture with a reduction in woods pasture. The use of more fertilizer is one of its objectives.

The growing appreciation of the value of fertilization in the Corn Belt was noted by Dr. Yoder. The application of lime has been increased ten times since 1920-24, but the actual need is for another doubling over the next ten years. The use of mixed fertilizers in 1947 was ten times the volume of that in 1935-9, but there is still a need for much more nitrogen and some more potassium. The educational requirements toward realization are proceeding slowly but surely.

A permanent program for better use of soil and water was presented by Dr. J. T. Sanders, legislative counsel of the National Grange. He traced the spread of crop areas over the nineteenth century, making the point that new lands, prairie lands, and not better cropping had contributed most to the disproving of the Malthusian theory of insufficient food for growing populations. The area has stood still for twenty-five years, he declared, so agriculture and the fertilizer industry must take thought of increased productivity to meet increasing needs. Stressing the essential role of moisture in any such program, the speaker urged that the water-use program of the nation be centralized and coordinated; that there be no repetition of TVA autocracy in the fifteen to twenty-five other watersheds where a plan should be developed. He would limit the regional boards to administrative functions and compel them to use the engineers and scientists of other, established governmental agencies in soil-conservation, flood-control, irrigation under the direction of a central board. The work, he declared, should be jointly private and public, especially in the matter of power production and distribution.

The fertilizer industry, in Dr. Sanders' opinion, faces a problem of revolutionary expansion: it must meet the growing demands for fertilizers and the views of farmers also on quality and price. If the "seeming reluctance" of the industry to meet current and increasing needs was not eliminated, he threatened that the grange, although it believes strongly in private enterprise, would support public means of meeting fertilizer shortages. Giving the industry credit for increased production and relatively low prices, he nevertheless insisted that the goal, not the progress, was the criterion and that the fertilizer industry faced the acid test of a socially sound program to prove the superiority of the American economic system.

**President's Address**

The business expansion of the fertilizer industry was 12 percent in volume during the closing year, said Maurice H. Lockwood, president of the association, and barring unforeseen depressants, he looked

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for a further increase of 8 percent in the coming year, although the trend toward higher concentrations might hold back the gross weight. The Department of Agriculture's estimate for the 1948-9 year, including phosphate rock, basic slag, and marketed animal manures, is 20,369,000 tons, compared with 16,838,652 reported for 1946-7.

Nitrogen demand continues to run ahead of the supply, Mr. Lockwood said, a survey showing in 100 returns an unfilled demand of 30 percent in fertilizer nitrogen and 35 percent in solid nitrogen for direct application. This deficiency aggregates 374,000 tons of N. Plans to increase production are progressing. The association is urging that governmental ordnance plants now making ammonium nitrate under the army export program be sold or leased to proprietary operators.

Commenting on the failure of TVA to give a definite expression of interest relative to the association's request that distribution of its plantfood products be not restricted to cooperatives, Mr. Lockwood said that the association had no intention of getting into an anticooperative engagement or a position of aiding or abetting government production and distribution of fertilizers. The board of directors authorized the circulating of the correspondence with TVA among the members.

The British fertilizer manufacturers' association, which had representatives in this country a year ago, extended an invitation through the NFA board for members of the United States industry to visit Britain and for an interchange of ideas. Mr. Lockwood also pointed out that there would be a special occasion for celebrations in 1950 which would be the centennial of fertilizer compounding in this country and the twenty-fifth birthday of the association.

**Fundamentality of Fertility**

Soil fertility is fundamental in health, in nutrition, in the general economy, and in all human welfare, declared Howard W. Selby, general manager of the United Farmers of New England. Low fertility meant low-value foods, and poor nutrition resulting therefrom was the worst of all health-sapping influences. Economic conditions which force farmers to mine their soil rather than manage it are widely detrimental, because the quality of a people, he averred, depends directly on the quality of the soil on which they live. Neglect of fertility is neglect of the community. All industry, schools, and agriculture should join in the promoting of proper consideration for the debt owed to the soil.

Improvement of the natural mineral content of food plants for man and lower animals was stressed for its necessity and importance, by Mr. Selby. He urged the promotion of selected strains of plants toward that end. Pointing out that variety in plants and in soils made fixed formulation of plant-improving agents impracticable, he asked the fertilizer industry to extend its study of individual needs. He suggested also that farmers set aside portions of their acreage for use as experimental plots in work on the control and improvement of the mineral contents of plants.

If the dairy industry were using the volume of fertilizer that would mean optimum pasturage, its consumption would be three times the present total output of the fertilizer industry, Mr. Selby said. The possibilities of improving the quality of milk by growing and feeding properly mineralized forage crops to him seemed large. He considered it most desirable that the fertilizer industry join further with dairymen and other agriculturists in work to lower the cost of such crops and increase their nutritive value and do the same with other crops used directly as human food.

**Learning More About Plants**

Agricultural knowledge is very limited, said Wheeler McMillen, editor of *Farm Journal*, in an address on The Kingdom of Plants. Of some 300,000 known species of plants, he said, not over 2,000 get any use by man all over the world, and even with the best and longest known their utilization falls far short of potentialities, the soybean, for example, being credited with all the way from 200 to 1,100 uses; corn having at least as many now and as many more possible when the molecular structure of starch becomes known and the chemical utilization of that material is really opened.

Soil is important for plant life, Mr. McMillen said, even though a plant draws but from 2 percent to 5 percent of its structure from the soil. That small portion however is essential to the production of the other 95 percent or more from air and moisture. So, he suggested that the fertilizer industry apply its technical talents to experimentation in the synthesizing of topsoil.

Declaring that man has but started to begin to understand not over twelve plants, as to their potential uses, Mr. McMillen urged a broadening of looking into what can be done with the plant resources which exist on all sides and, unlike mineral resources, can be continuously reproduced largely through their own offices. He told interestingly of the development of fire-fighting foam with soybean protein and the making of cigaret paper from the once-wasted straw of the flaxseed farm. He opined that it might be possible even to find a plant that would cure the common cold!

Neither the synthesis of topsoil nor the full utilization of plants can be attained, Mr. McMillen declared, unless the hands of men are free to work, to invest, to adventure. Quoting Franklin on the development of despotic government out of the corruption of a people until they cannot do for themselves, he averred that as we continue to ask government to get us out of this or that, to do something or another for us, we are becoming corrupt (weak-

—*Continued on page 62*

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# Agricultural Chemicals

Advanced prices recently noted in DDT have become more stabilized but most of the buying movement in insecticide materials has been for immediate shipment. A labor strike at one of the large potash producing plants has not been settled and shipments from this supply source have been cut off during most of June. Ammonium sulphate has remained in heavy demand with contract prices adjusted to those prevailing at time of shipment. Canadian producers of ammonium nitrate and cyanamide as well as importers of Chilean sodium nitrate are awaiting the announcement of the nitrogen allocation for the coming fertilizer season. The feed trade has supported the market for packing-house byproducts without causing any significant change in prices.

Fertilizer tax tag sales during May, of 657,000 equivalent short tons, were the highest of any May on record and were 8 percent above the 609,000 tons reported for a year ago. Returns from state control officials in the 15 reporting states to the National Fertilizer Association also indicate that May tag sales declined seasonally from April and were the lowest for any month of this year. Tag sales for July-May amounted to 9,132,000 equivalent tons, compared with 8,390,000 tons during the corresponding period in the previous fiscal year. Inasmuch as sales for the first 11 months of the current fiscal year are above total sales for any previous fiscal year, the fertilizer industry can look forward to setting a new record in fiscal year tag sales.

Production of superphosphate at 176 plants during April totaled 972,000 equivalent short tons (basis 18 percent a.p.a.), according to reports submitted to the National Fertilizer Association and a summary of reports to the Bureau of the Census. The level of production during April, though it was 6 percent below the record attained in March, was 12 percent above the 864,000 tons reported for a year ago and 23 percent above two years ago. Total supply for April was 1,974,000 tons, compared with 1,541,000 last year. Shipments during the month amounted to 569,000 tons, a 13 percent increase over last April, while 451,000 tons were used by producers in mixed goods. End of month stocks, totaling 953,000 tons, were considerably higher than the 608,000 tons of a year ago.

## Nitrogenates

**Ammonium Sulphate**—Market supply situation has shown no sign of easement for coke-oven material during the past month. It is stated that several producers are behind contract schedules and are not eager to take on additional business until the market is brought into a better state of balance. Others have named $40 per ton for July shipment and according to trade reports, futures will be booked at prices at time of shipment. Buying interest is active.

**Bone Meal**—Buying interest, mostly from the food trade, has been active enough to keep production under contract for prompt shipment. The raw and steamed grades maintain a relatively tight position at the present time.

**Castor Pomace**—The market situation has uncovered no important change during June. The sold ahead condition of output has kept spot shipments exceedingly tight. No variation in prices has been recorded.

**Cyanamide**—Producers of this material as well as Canadian ammonium nitrate and Chilean sodium nitrate are awaiting the announcement of nitrogen allocation for the coming fertilizer year. Meanwhile, market activities are mostly of a routine character.

**Dried Blood**—Steady at former prices with demand from the feed trade contributing strength to the situation. Stocks not excessive but meeting current requirements in most instances.

**Tankage** — Trading moderately active with pressure not pronounced enough to cause important price variations in either direction. Importations last week included 300 bags from Montevideo.

### *Fertilizer Tag Sales: May*

| | Equivalent tons—May | | Jan.-May |
|---|---|---|---|
| | 1948 | 1947 | 1948 |
| Virginia | 44,997 | 62,080 | 425,515 |
| North Carolina | 76,437 | 93,618 | 1,054,367 |
| South Carolina | 36,650 | 45,191 | 619,258 |
| Georgia | 58,891 | 71,117 | 894,071 |
| Florida | 55,965 | 66,300 | 378,639 |
| Alabama | 107,666 | 52,050 | 706,954 |
| Tennessee | 69,972 | 54,088 | 259,878 |
| Arkansas | 34,795 | 13,100 | 129,214 |
| Louisiana | 13,650 | 11,550 | 126,667 |
| Texas | 38,387 | 23,728 | 250,584 |
| Oklahoma | 1,450 | 6,062 | 73,746 |
| Total South | 538,798 | 505,424 | 4,918,703 |
| Indiana | 48,813 | 52,062 | 338,675 |
| Kentucky | 47,020 | 40,700 | 332,767 |
| Missouri | 16,096 | 8,480 | 222,334 |
| Kansas | 6,280 | 2,070 | 52,255 |
| Total Midwest | 118,209 | 103,293 | 946,031 |
| Grand total | 657,007 | 608,717 | 5,864,734 |

*For Late Market Developments, See Page 4*

## *Market Trends*

**Prices Advanced**

DDT, 5c. per lb.

**Prices Reduced**

None

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 75.1 | 75.1 | 74.5 | 71.5 |

*(For Current Prices see Page 9)*

## Phosphates

**Phosphate Rock**—Current demand continues active and stocks above ground are short enough to maintain a tight market position although it is expected there may be some easement of supplies later in the year.

**Superphosphate**—April production of normal 18 percent was 866,003 tons, according to the Bureau of the Census. Stocks on April 30 were 785,965 tons. Shipments were 11 percent larger than in the same month a year ago. Production of concentrated superphosphate during April reached the record high level of 39,208 short tons and exceeded March production by 4 percent and that of April, 1947, by 9 percent. Stocks of concentrated superphosphate on hand at the end of April were 65,642 tons or 20 percent larger than for April, 1947. Other operations in concentrated goods were generally below the preceding month but higher than for the same month last year. The production of wet-base goods was 7,552 tons and maintained the level attained in March, 1948, and exceeded the level of April, 1947, by 37 percent. Other activities for this type of material declined below the preceding month but were appreciably higher than reported for the same month of last year. Stocks on April 30 were 3,009 tons.

## Potashes

Labor difficulties at one of the large producing plants has temporarily shut down output and shipments. This is one of the unforeseen developments that occasionally disrupt the general movement. In other supply quarters it was stated that shipments are going forward rapidly to meet scheduled requirements of contract consumers.

## Pesticides

June has shown some improvement in the volume of sales although producers admit that individual transactions have been small and restricted mostly to actual requirements. Buying interest appears to be regulated chiefly by weather conditions which in the cotton South have favored planters rather than sellers. It is also stated that the influx of new synthetics has made it difficult for buyers to determine just what they want. Producers have gauged their output to meet the current extent of demand, which means that inventories are relatively low in both producers' and consumers' hands. According to trade reports, the recent advance in DDT is becoming more stabilized. Paradichlorobenzene stocks have improved during the month, and the aggregate sales of calcium arsenate and lead arsenate have increased. The exception to the rule is copper sulphate, where demand has increased significantly to fight the blight which has infested potato and tomato plants from Maine to the Virginias as a result of wet weather.

## Sulphur and Pyrites

Mine shipments of native sulphur in April amounted to 431,684 long tons, according to the Bureau of Mines. In March, shipments were 422,339 long tons and in April a year ago 411,481 long tons. Apparent sales in April were 422,710 long tons, against 383,230 long tons in the preceding month and 421,712 long tons in April last year. Pyrites remained unchanged.

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| | |
|---|---|
| Appearance | Oily water-white liquid |
| Odor | Mild ester |
| Acidity (as Phthalic Acid) | 0.01% by weight max. |
| Specific Gravity 20/20°C | 1.047-1.049 |
| Assay (ester content) | Minimum 99% by weight |
| Weight per gallon | Approximately 8.75 lb. |

Containers: 50-55 gal. one-way steel barrels

* * *

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# Coaltar Chemicals

The market for coaltar products was in a generally quiet position last week. There were no price changes, either for basic products or intermediates, and the weekly price index held to its previous level.

The supply and demand picture remained largely what it had been for some weeks past. Most of the basics continued in short supply, while demand for them was as strong as ever, and in some cases was likely to become even tighter. The intermediates, taken as a whole, were in a better position. It was reported that some of them had recently eased a bit as to supply, and others were in a relatively free position. A few, however, were still tight and showed all signs of remaining that way for some time.

Toluol and xylol were expected to become even tighter, following the announcement of the Army-Navy Specifications Board that after July 1 it would demand the addition of 10 percent aromatics in aviation gasoline. It was expected that this requirement would have its effect first on the petroleum industry, but the coaltar distillers also foresaw it making added demands on their already overworked production facilities.

Naphthalene was quiet during the week, but the industry was keeping a close eye on it. It was thought possible that this material might rise in price sometime in the near future, and possibly on short notice. Phthalic anhydride was in about the same position. As of last week, it was holding its own on price, but it was known that some of the major producers were considering upping their quotations. There was no definite word on when this might happen, but users of the materials knew the move could come suddenly and therefore were watching the product closely.

Creosote continued to be available in abundant quantities, and was probably in the best supply position of any of the basics. Domestic production continued at good levels and imports from England were heavy. Demand was satisfactory, but could not drain the surplus off the market.

The operating rate of steel companies having 94 percent of the steel capacity of the industry was 96.2 percent of capacity last week, according to the American Iron and Steel Institute. This was equivalent to 1,734,000 tons of steel ingots and castings, compared to 1,730,400 tons the previous week, 1,672,900 tons one year ago, and 1,281,210 tons for the average week in 1940, the highest pre-war year.

### *Market Trends*

**Prices Advanced**

None

**Prices Reduced**

None

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 154.5 | 154.5 | 152.8 | 133.8 |

(For Current Prices see Page 9)

## Basic Products

**Benzol**—The market for this material was largely unchanged during the past week. Supplies were still somewhat on the tight side, although it had been reported that in recent weeks there had been some slight easing. It was still not sufficient, however, to make the product entirely free. There were reportedly no considerable stocks of the material on hand, especially in the East. These conditions had no effect on the price structure of the material, however, and the range remained firm and unchanged with no indications that any changes were planned for the immediate future.

**Coaltar**—There had, in the past few weeks, been some slight easing in the supply picture for this material, but it did not come to sufficient proportions to make the product completely easy as to availability. Producers were still having their difficulties in trying to keep production up to a level somewhere near where it could satisfy their customers and the users of the material were searching diligently to find enough of the material to accommodate their needs. The price structure remained firm and unchanged despite the off-balance market conditions, and there were no indications that prices would change during the next few weeks, at least.

**Creosote**—Following the announcement two weeks ago that all major producers of this material had come down to a price of 19½c. a gallon, the market for the item last week was unchanged and without particular feature. Unlike most coaltar products, this one was in especially heavy supply. The stocks of it, in fact, had accumulated to such an extent that they were presenting handlers of the material with a considerable problem in finding adequate storage facilities. The main reasons for the abundance of stocks were the very high rate of domestic production and the heavy influx of shipments from England.

Demand for the material had reportedly not fallen off in the sense that users did not have as great a need for the material as they had some time back, but the weather, for one thing, had been against them of late. There had been considerable rain in the timber country and this had to some extent prevented drying of wood, with the result that stocks had piled up in the forests. Also, the diversion of great quantities of lumber, that would normally have found its way into use as ties and poles, was taking place, with the material being earmarked for use as building material.

**Cresol**—Producers of this material last week were still faced with the difficult situation of not being able to produce as much of this item as their customers were calling for. The shortage of the product had been noted for some time and it was said that there seemed to be no immediate prospects for an improvement in the situation. Producers were doing all they could to bring some easing into the picture, but despite their best efforts the situation still remained off balance. Prices, for both the technical and USP grades, were firm and unchanged after advancing a few weeks back. Some imports of the material from England had been reported from time to time during the last few months, but they were not of sufficient quantity to furnish more than a very slight easing of the supply condition.

**Cresylic Acid**—There had been, in recent weeks, fairly good importation of this material from England, but the arrivals were still not sufficient to brighten the supply picture here by more than a very small bit. The material remained very tight, but there was no easing up in the demand for it and it did not appear that there would be any, at least not in the immediate future. Prices a few weeks ago underwent some minor fluctuations, but as of last week they were firm and unchanged and gave indications that they would remain that way at least for the time being. Two hundred thirty drums reached New York from Liverpool last week.

**Naphthalene** — Consumers and others close to the market for this material were still without definite word last week on what might happen to prices for the item in the immediate days to come. Several weeks back there had been some minor fluctuations and these were followed by talk in the trade to the effect that the material might go up in price and probably on short notice. Producers admitted that the matter of prices was being given attention but had no immediate statements to make on what could be expected. Last week they reported that the possibility of the product taking a price advance had not disappeared, but they did feel that it might be postponed for a short time. Still, they had nothing definite to say one way or another, with the result that those who watch the market closely were forced to continue doing just that—watch the market closely, for it was expected that if a price rise did come about it would come rather suddenly.

In the meantime, demand for the material continued to be strong, and although producers were doing all they could to accommodate the market they were still

### *Coke By-Products*

Estimates of by-product cokeoven operations in the week ended June 19 indicate the following output of by-products from that source:—

| | | |
|---|---|---|
| Ammonia, liquid $NH_3$ | lbs. | 1,185,000 |
| Ammonia sulphate | lbs. | 30,700,800 |
| Benzol | gals. | 2,868,800 |
| Coaltar | gals. | 14,252,000 |
| Creosote oil | gals. | 738,720 |
| Naphthalene, crude | lbs. | 1,896,900 |
| Phenol | lbs. | 221,610 |
| Toluol | gals. | 773,700 |
| Xylol | gals. | 174,720 |

*For Late Market Developments, See Page 4*

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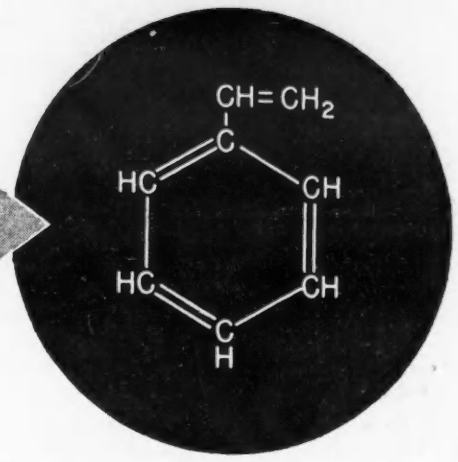


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unable to meet all the requests that were being made for the material. There had in recent weeks been some imports of the item but when examined against the overall picture, they were not much more than a drop in the bucket.

**Phenol**—Demand for this material continued last week at the high rate that had been noted for some time past. Production was going along in high gear but it was still not sufficient to make enough of the material available to satisfy the needs of all users. The plastics industry, in the recent past, had been taking a bit less of the material than previously, but producers reported that this decrease in orders, while it helped to some extent, was still not sufficient to bring about any appreciable change in the supply picture. Sellers of the material were hoping that they might be able to import material from England, but at the moment that seemed like a slender hope. England apparently had the material, but needed it herself, and despite the great desire on her part for dollars, preferred to keep all of her phenol production within her own borders where it could be utilized by British industry. The short supply picture had no effect on the price structure, and last week prices remained firm and unchanged and there were no indications that any changes were in prospect in the immediate weeks to come.

**Pyridin**—The refined material continued in a short position last week, but the denaturing grades were reported to be in a better position and reasonably easy as to supply. Demand for the material continued to run along at good levels. Producers had no changes in the price structure to report and indications were that none were expected in the immediate future.

**Solvent Naphtha**—Supplies of this material remained tight during the past week, and the recent falling off is demand from the manufacturers of paint and varnish proved to have little effect as far as making the product more easily available was concerned. What material the paint and varnish makers were not taking was being absorbed quickly by other industries, and the overall picture showed little improvement despite their lessened demands. Prices, however, remained firm and unchanged and there were no reports to indicate that they might change in the immediate future.

**Toluol**—The recent announcement that the Army-Navy Specifications Board will require the addition of 10 percent aromatics in aviation fuel after July 1 was expected to tighten even more the supply position of this material. For some time toluol had been in a difficult supply spot and there were no hopes for an immediate improvement, but the Army-Navy board's announcement served to make this situation even worse. The effect of the announcement was expected to be felt first in the petroleum field but it was thought that it would not be long before it would also be felt by coaltar distillers. There had in recent weeks been some falling off in demand for this material from the protective coatings industry, but when viewed against the entire supply set-up, that decrease had only a minor effect, and the new conditions for aircraft use will more than offset it in the days to come. Toluol prices, however, remained firm and unchanged last week despite the changing conditions in the market, and the major producers had no indications that there would be any in the immediate future.

**Xylol**—This item, too, was affected by the recent requirement for 10 percent aromatics in aviation fuel. The material, as well as toluol, was expected to be in even shorter supply as a result of this requirement. As it was, producers had for some time past been in a difficult position in trying to supply all the market, and the recent requirement of the Army-Navy Specifications Board for 10 percent aromatics could do nothing for them but cause their difficulties to multiply. There were no immediate indications that this condition would have any effect on the price structure, and as of last week quotations remained firm and unchanged.

## Intermediates

**Acid, Tobias**—This material continued to be quoted at 65c., in barrels, last week. Supplies of it were reported to be only fair, but demand was running to good levels.

**Betanaphthol**—Both the resublimed and the technical remained steady as to price during the period under review. The former was still being quoted at 75c. in drums and the latter at 30c. in carloads and 32c. in less than carloads. Supplies were reported to be running at about fair levels and demand was good.

**Cyclohexylamine**—This item was in a free position as to supply last week, and its price remained unchanged. It was still

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being offered at 32c. a pound, in drums, at the works.

**Dichlorophenol**—The shortage of this material continued to be felt last week, and producers of it were having a difficult time trying to satisfy the demands that were being made on them by the users of the product. The supply position had no effect on the price structure, however, for the material continued to be quoted at the previous listing of 28c. a pound in drums.

**Dinitrochlorobenzene** — Users of this material were having no particular trouble in obtaining enough of the product to fulfill their demands, for the item was reported to be in a comfortable position as to supply. There were no changes in the price structure of 14c. to 17c. a pound in drums.

**Diphenyl**—This material was coming in for only a small demand, but what calls there were for it could be easily filled last week, since the item was in a strong supply position. The price range remained unchanged at the previous listing of 15c. a pound in carloads and 16c. to 20c. in less than carloads.

**Diphenylguanidin**—Ton lots, in drums, were going for 35c. a pound and smaller lots were selling at 40c. a pound last week. These figures represented no changes in price from the former listing, despite the fact that the material was in a tight position as to supply.

**Metachloroanilin**—The supply condition of this material showed no change during the period under review, with producers reporting that the item was in as tight a position as ever, and that the demand for it was still running along at strong levels. Prices, however, were unaffected during the period and the material could still be bought at the previously listed quotation of 75c. a pound in drums.

**Metacresol**—The tightness of supply continued for this material during the past week, and producers of it could see no immediate hopes of the situation easing. Demand was good and prices remained firm and unchanged at the previous listing of 65c. to 80c. for the 98 percent material in drums, at the works.

**Metanitroparatoluidin** — The range of $1.22 to $1.33 remained firm and unchanged for this material during the last week and there were no indications of any price changes planned for the immediate future. Demand was satisfactory, but the supply of the item could not be termed more than fair.

**Orthoanisidin**—The price of 80c. a pound, in barrels, prevailed for this material last week and there were no indications of advances being planned, despite the fact that the material was in a tight position as to supply.

**Orthochloroanilin**—This item was reported to be in a somewhat freer position as to supply last week, although there was no great abundance of it, and demand was still reasonably strong. The material was being quoted a 60c. a pound in drums, in lots of 10,000 pounds or more, and at 62c. to 67c. in smaller lots.

**Phthalic Anhydride**—After some recent price fluctuations, this material held its own on price during the past week, but no one could say definitely how long the present quotations would continue to hold. Some producers were considering possible advances, and although they had no immediate word, it was considered possible that if the material did go up in price it might do so rather suddenly.

The item continued in short supply, although the shortage was reported to be considerably less than it was six months ago. Falling demand from synthetic resins and phthalic plasticizer manufacturers was mainly responsible.

There has been no increase in production as yet, but a new plant is under construction and expected to be in production by the middle of Summer. It was said by reliable observers that there would be some relief in the supply situation in the next few months, because of new facilities and lessened demand. If current business levels prevail, the supply and demand of this material should be in balance by the end of the season, it was said. No excess of the item was anticipated, however.

## Forest Products Research Society Publishes First Proceedings Volume

The Forest Products Research Society has published volume one of the proceedings of the society, containing the papers and discussion presented at its first national meeting in Chicago last fall and its monthly bulletins from May to October, 1947. The volume also contains the society's articles of incorporation and directories of membership. Copies may be obtained at $6 each from Thomas R. C. Wilson, Forest Products Research Society, Post Office Box 2010, University Station, Madison 5, Wis.

CHEMICALS and INTERMEDIATES

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# Petroleum Derivatives

Rising gasoline demand, from both government and civilian sources, posed new supply headaches to petroleum derivatives makers last week. This Thursday, for example, the Army-Navy Specification Board will begin to crack down in earnest on its 10-percent aromatics regulation. This move, which will require all producers of aviation fuel to include at least 10 percent aromatics in aircraft gasoline shipments to the government, is expected to take a heavy toll of petroleum toluol and xylol supplies available to industry.

This development is only one facet of the supply problems facing solvents producers. Aliphatics, which have been narrowing during recent weeks, are also expected to tighten. Here too gasoline remains the key factor. The situation boils down to the fact that motor fuel, offering higher profit margins than aliphatic materials, has been receiving production priority. With demand for gasoline generally on the upswing during the Summer, and particularly so this Summer, there is little prospect of easement before the Fall.

## Solvents and Diluents

**Cleaners' Naphtha**—Despite the continued laxity of demand last week, the supply position of this and other aliphatic solvents showed no material improvement. The persisting shortage of gasoline, which was expected to intensify during the balance of the Summer, still had a narrowing influence over naphtha stocks. However, at least two makers of this solvent reported that regular customers were still receiving shipments in reasonable quantities, but they insisted that orders were being held to a minimum. Prices were maintained in all areas.

**Protective Coatings Solvents**—It was clearly evident in the market last week that aromatics inventories of the various producers bore a definite relationship to their participation in the government aviation fuel program. One company, known to be supplying the government with huge quantities of aviation gasoline, reported toluol severely short and xylol slightly less tight. Another maker stated that stocks were comfortable, while other producers described the supply position of aromatics at varying degrees of tightness. However, there was agreement among trade sources that after July 1 the amount of petroleum toluol and xylol available to industry will be greatly reduced. This widespread belief is attributed to the demand of the Army-Navy Specification Board that 10 percent aromatics be included in all future shipments of aviation fuel to the government, beginning with the new fiscal year. The price structure was without variance.

The situation in higher boiling range aromatics and aliphatic-aromatic blends was likewise unchanged during the week. Most of these materials were on the short side, although some blends were in reasonably good supply. With the shortening of pure aromatic supplies due at the end of this week, there was every indication that stocks of blends and partial aromatics would be similarly narrowed. Meanwhile, prices were firm in all areas.

A seeming paradox of slackened demand and snug supplies remained the dominant factor in the aliphatic solvents market during the week. The best that could be said for consuming inquiry was that it was spotty. Yet, the fact remained that all the aliphatics were tight, with strong indications that the situation would become even more severe during the balance of the Summer.

Key to this puzzling phenomenon, of course, was gasoline. Since motor fuel production by current market values brings higher profit margins to the maker, it follows that he will continue to favor gasoline over aliphatic output. Furthermore, since the petroleum industry is entering the height of the motoring season, there is little reason to believe that there will be any improvement in the aliphatic situation while gasoline remains under pressure of such an intense demand.

Thus, lacquer diluent was short last week. Calls for the material were not particularly numerous, but at least one maker insisted that his business was steady. Prices were stable in all areas. West Coast postings for 170-255 degree F. lacquer diluent ranged from 14.7c. to 15.8c. per gallon, tanks, ex-tax, the price varying with the shipment point.

While the situation for lacquer diluent was short, it could hardly be called severe. But for mineral spirits and stoddard solvent the supply problem by last week had indeed become critical. Complication of the supply position was attributed to the upsurge of demand, particularly from makers of trade sales. Meanwhile, prices were firm. In California, mineral spirits ranged from 14.2c. to 15.2c. per gallon, tanks, ex-tax, f.o.b. San Francisco.

Both the 245-360 and the 205-290 degree grades of V. M. & P. naphtha ranged from 14.7c. to 15.8c. per gallon on the West Coast last week. Listings in other areas were also firm. Supply-wise, the pinch was felt in the market, though not as severely as for mineral spirits and stoddard solvent.

**Rubber Solvents**—The same situation of shortened supplies and weak demand prevailed in this section during the week. Prices were without fluctuation. In California, rubber solvent was listed at 15.2c. per gallon, tanks, ex-tax, f.o.b. San Francisco.

## Lighter Fractions

Prices of liquefied petroleum gases steadied last week following recent reductions of 1c. and 7/10c. per gallon by group 3 producers on propane and butane, respectively. Propane, which was still unusually easy during the week, was quoted at 5.7c. per gallon, tanks, while butane, also in good supply, brought 6c. per gallon, tanks. East Coast listings on these materials, however, remained at previous levels. There was some mild surprise evidenced because of the continuing abundance of propane, but producers maintained that the situation would almost surely tighten after September 1. Butane, which had been expected to remain in good availability during the Summer, was only slightly less ample than propane. As to the price changes, makers stated that these were only temporary fluctuations and that quotations would most likely take an upward turn this Fall. As for heptane, hexane and pentane, there was little to report. They remained in uniformly good supply, while demand, though hardly heavy, was still steady.

*Los Angeles.*—Propane and butane supplies were short of demand in this area last week. Prices were unchanged. Propane was quoted at 6.8c. per gallon, f.o.b. Ventura, Cal., and butane was named at 7.3c., ex-tax, that city.

## Miscellaneous

**Crude Oil**—Posted prices in all fields, which for the record were unchanged last week, were generally believed to bear little relationship to the actual prices paid by refiners to crude-oil suppliers. Payment of premiums was openly reported in many areas, with some independent refiners said to be paying up to 35c. per barrel over accepted postings. Some attempts were being made to limit excessive bidding for crude oil stocks, but the hard fact remained that supplies were difficult to obtain without premiums. Whether these conditions would mean another general increase in crude oil postings was a difficult matter to predict last week. It is a matter of record, however, that similar conditions prevailed prior to the last general hike in crude oil quotations. Arrivals, meanwhile, aggregated 563,661 barrels of crude petroleum from Las Piedras, Puerto La Cruz and Ras Tanura.

**Fuel Oil**—Importations during the week totaled 162,008 barrels of fuel oil and 35,716 barrels of diesel oil from Aruba.

### *Market Trends*

**Prices Advanced**

None

**Prices Reduced**

None

*(For Current Prices see Page 9)*

### *Crude Oil Stocks*

Stocks of domestic and foreign crude petroleum at the close of the week ended June 12 totaled 221,558,000 barrels, according to the Bureau of Mines. Compared with the total of 220,402,000 barrels for the preceding week, this represents an increase of 1,156,000 barrels, comprising an increase of 757,000 barrels in stocks of domestic crude and an increase of 399,000 barrels in stocks of foreign crude. Heavy crude-oil stocks in California, not included in the gasoline bearing stocks, totaled 7,269,000 barrels, an increase of 133,000 barrels.

*For Late Market Developments, See Page 4*

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# Textile and Leather Chemicals

### *Market Trends*

**Prices Advanced**

Sago flour, ¼c. to ½c. per lb.

**Prices Reduced**

Potato starch, ½c. per lb.

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 380.3 | 377.6 | 375.5 | 314.8 |

(For Current Prices see Page 9)

Feature of the sizing materials market last week was the fractional advance of sago flour and the fractional decline in potato starch. The strength in sago flour was the result of political disturbances in the Netherland East Indies, which unsettled that market and created a great deal of uncertainty as to the fulfillment of heavy contracts recently placed for shipment to the United States and other countries. Buying interest was increased for goods afloat and on spot and stiffened the market. Weakness in potato starch was occasioned by freer offerings from producers in the West. Grinders in Idaho were advised of the delivery of substantial stocks of potatoes by the government for the production of starch. With demand slow, the prospects of increased supplies resulted in moderate price reductions. Other sizing materials were in slow demand, with consumers taking moderate quantities for prompt needs. Reports from Brazil indicated a steady market for tapioca flour. Trading in replacements was inactive with buyers and sellers about one-half cent apart.

There was no noticeable improvement in tanners interest in replacements of tanning materials. Market was dull and featureless and with the lack of business, prices though unchanged were more or less nominal. Tanners were working off sizable inventories and were not expected to show much interest in replenishing supplies during the summer months.

World wool 1948 production will amount to 3,830,000,000 pounds, the Office of Foreign Agricultural Relations predicted, about 3 percent above the revised estimate for 1947. Higher production is indicated for all continents except North America where the clip has been declining annually for six years, owing to competition from other farm enterprises. For the first time since 1944, wool production in Australia is expected to exceed 1,000,000,000 pounds. Last year the clip amounted to 990,000,000 pounds and in 1948 is estimated at about 1,040,000,000 pounds, OFAR added. South American wool production for the season beginning this Fall will be higher in all countries. Production is forecast at 786,800,000 pounds, against 763,000,000 pounds in 1947 and 638,000,000 pounds in 1936-40.

Cotton consumption by mills in May was indicated at 785,440 bales, compared with 829,730 bales in April and 807,135 bales in May, 1947, it was reported by the Census Bureau. Consumption during the 10 months ended May 31, totaled 7,917,696 bales against 8,617,619 bales for the same time last year.

Rayon yarn shipments in May, totaling 93,600,000 pounds, ran slightly ahead of April shipments and were 19 percent ahead of those in May, 1947, according to Rayon Organon. Domestic rayon deliveries in the first five months of the year, totaling 447,600,000 pounds, showed an increase of 17 percent over the corresponding period of 1947, it added. In an analysis of world output of rayon yarn and staple in 1947, Rayon Organon states a total of 1,900,000,000 pounds were produced, an increase of 19 percent over the previous year. Filament yarn output in 1947 reached a new all-time peak, exceeding the previous record made in 1941 by 4 percent. Production of rayon staple (rayon fibres cut into the lengths of natural fibres) also showed an increase over 1946, but was still less than half the record output of 1941.

## Chemicals

**Acetic Anhydride**—Conditions in this market remained firm and reflected the tight condition of basic materials. Prices were unchanged and steady.

**Aluminum, Acetate**—Steady demand absorbed the output and available stocks were light and closely held.

**Bichromates**—Consuming demand continued to take the current production against current contracts. A good volume of business was reported booked for third quarter requirements at the recent price increase. Resale material was scarce. Export inquiry was fairly active, but shipments were restricted owing to the high cost of resale lots.

**Chrome Acetate**—Demand was moderate, chiefly for prompt needs. Prices were maintained at former levels for all grades.

**Soda, Acetate**—Stocks were reported limited supply. Market was firm, although prices remained unchanged at current levels.

**Soda, Hydrosulphite**—Deliveries against previous orders were in good request, although new business was reported light and for actual requirements. Quotations were well held.

**Sulphonated Oils**—Demand for sulphonated oils lacked improvement. Consumers purchased small lots for immediate requirements. Sulphonated tallow and vegetable oils were unchanged and maintained at former quotations.

## Sizing Materials

**Albumen, Egg**—This market continued on a firm basis, although trading was moderate and for prompt delivery. Supplies, however, were not plentiful and were closely held. Edible flake was ranged from $2.62 to $2.70 per pound, barrels, depending upon quantity. Sellers were not pressing for business as production has been well sold ahead, and was appreciably reduced. Technical continued in small supply and was maintained at $1.55 to $1.65 per pound, according to quantity. Dried whole egg purchases totaling 2,328,501 pounds at $1.26 and $1.28 per pound, barrels, f.o.b. works were reported by the Department of Agriculture, June 16.

**Albumin, Blood**—Producers endeavored to fill a large backlog of orders, because of the recent strike which stopped production for at least ten weeks. Market was firm at prevailing quotations.

**Corn, Sugar**—Interest in tanners chipped was slow, but prices were steady and reflected the high cost of the grain.

**Dextrin, Corn**—Sold up production continued to restrict new business. Consumers were taking sizable quantities as fast as obtainable. Deliveries against previous orders were from three to four weeks behind schedule. All grades were firmly held in view of the prevailing cost of the grain.

**Egg, Yolk**—Consuming inquiry was reported dull, with trading confined to limited quantities for actual needs. Supplies were fairly liberal and were quoted at 95c. to $1 per pound, according to seller and quantity.

**Sago Flour**—Political disturbances in the Netherland East Indies have unsettled the sago flour market there and created a great deal of uncertainty as to whether heavy shipments of flour recently booked to this and other foreign countries would be fulfilled. This created a firmer tone here and increased demand. Prices were raised ¼c. to ½c. per pound as to quantity. Carlots were nominal at 8½c. per pound, exdock and at 9c. to 9½c. per pound, exstore, as to quantity.

**Starch, Corn**—Some improvement was noted for prompt delivery, and a good volume continued to be taken on prior orders. Market remained steady as a result of the high cost of production. New business of late was reported for actual requirements. Prices were maintained for all grades. The visible corn supply was reduced 234,000 bushels to 4,964,000 bushels for the week ended June 19, against 10,967,000 bushels for the same time last year, according to the Chicago Board of Trade.

**Starch, Potato**—Increased offerings and quiet demand weakened this market and prices were off about ½c. per pound. Substantial supplies of potatoes were made available to starch producers in Idaho by the government. Starch in carlots was offered at 8c. per pound, New York basis. Maine grinders were quoting at 8¼c. per pound, carlots, same, basis, and it was intimated that this figure could have been shaded on firm bids. Supplies on spot were quoted at 9c. to 9½c. per pound, depending upon quantity.

**Tapioca Flour**—Business was confined to moderate quantities on the spot, while trading for shipment continued dull. Offers for shipment were fairly liberal and well held. Domestic users showed some interest, their ideas were about ½c. below

For Late Market Developments, See Page 4

shippers who would not meet the lower figure. High grades were quoted at 9.90c. per pound, exdock and 10¼c. to 10½c. per pound, on spot for smaller quantities. Mediums were named at 8c. exdock and at 8¼c. to 8½c. per pound as to quantity.

## Tanning Materials

**Chestnut Extract**—Demand was reported dull and confined to small lots for actual requirements. Quotations were unchanged.

**Divi Divi**—Offerings were reported light and were well held. Buying interest was limited and with business slow, the market was more or less nominal.

**Mangrove Bark**—Available supplies for shipment continued scarce. Trading was inactive, though some inquiry was noted for replacements. Prices were steady, but entirely nominal.

**Myrobalans**—Quiet conditions prevailed in this market. Offers for shipment were quite liberal, though tanners continued to show little inclination to place orders for replacements at this time. Prices for shipment were unchanged and fairly steady.

**Quebracho Extract**—Tanners were reported practically out of the market in regard to replacements. Shipments were offered freely at prevailing quotations. Arrivals were noted at 7,600 bags at Boston last week, for delivery on previous contracts.

**Valonia**—This market was quiet, with buyers and sellers on the sidelines. Prices for shipment were steady and maintained at current levels for all grades. Consuming inquiry continued slow.

**Wattle**—While trading was inactive, offers for shipment continued limited and primary markets continued firm. Bark and extract were in limited supply at producing centers and were maintained at former levels. Some 3,240 bales of bark were received at New York and 870 bags of extract at Boston last week, against previous contracts.

## American Resinous Develops New Oven

American Resinous Chemicals Corporation, Peabody, Mass., in cooperation with Gehnrich & Gehnrich, Inc., has developed a fusion oven for use in curing organosol coatings. With the new oven, the company said, production speeds of ten to thirty yards per minute can be obtained, depending upon the thickness of fabric coating to be fused.

A standard convection unit has been developed with overall dimensions of approximately ten feet in width and height and seventeen feet in length that accommodates a web travel of thirty-five feet. The oven is of standard insulated steel panel construction and is supplied with a recirculating system so designed as to provide most uniform temperature distribution within the unit as well as maximum operating efficiency. It uses either gas or electricity as a heating medium.

### Southern Research Inst. Adds to Staff

Southern Research Institute, Birmingham, Ala., has added John L. Harrington, formerly with the Humble Oil & Refining Company, to its staff. Other additions to the institute's staff include Willis Woodruff jr., Mrs. Willa P. Whatley, Miss Martelia Bell, Miss Margaret A. Newton and Miss Jeanette Esslinger.

## Chemical Workers Data For April Reported

Estimated number of production workers in the chemicals and related products industries in April, 1948, as compared with the number in March, and with those in April, 1947, was reported last week by bureau of labor statistics of the Department of Labor as follows:—

| | 1948 | | 1947 |
|---|---|---|---|
| | Apr. | Mar. | Apr. |
| Ammunition, small arms | 7,800 | 7,800 | 6,800 |
| Chemicals, not elsewhere classified | 198,000 | 196,300 | 195,800 |
| Compressed and liquefied gases | 10,000 | 9,900 | 9,400 |
| Cottonseed oil | 15,200 | 17,600 | 15,500 |
| Drugs, medicines and insecticides | 64,200 | 65,200 | 69,000 |
| Explosives and safety fuses | 22,100 | 22,400 | 21,200 |
| Fertilizers | 33,400 | 34,700 | 31,800 |
| Fireworks | 2,400 | 2,600 | 2,800 |
| Paints, varnishes and colors | 50,100 | 50,700 | 50,200 |
| Perfumes, cosmetics | 11,200 | 11,600 | 12,400 |
| Rayon, allied products | 63,500 | 63,700 | 60,900 |
| Soap | 21,800 | 21,900 | 23,700 |
| Total | 580,000 | 587,000 | 579,000 |

Department of Labor indexes for production-worker payrolls for chemicals and related products industries during the same periods (1939 average=100) follow:—

| | 1948 | | 1947 |
|---|---|---|---|
| | Apr. | Mar. | Apr. |
| Ammunition, small arms | 395.6 | 396.8 | 337.5 |
| Chemicals, not elsewhere classified | 564.8 | 558.6 | 511.6 |
| Compressed and liquefied gases | 483.7 | 473.6 | 412.9 |
| Cottonseed oil | 270.2 | 316.4 | 247.8 |
| Drugs, medicines and insecticides | 477.4 | 487.6 | 462.4 |
| Explosives and safety fuses | 561.5 | 585.0 | 470.9 |
| Fertilizers | 482.0 | 492.3 | 440.1 |
| Fireworks | 566.0 | 625.8 | 719.5 |
| Paints, varnishes and colors | 329.4 | 332.9 | 309.8 |
| Perfumes, cosmetics | 213.5 | 220.4 | 219.0 |
| Rayon, allied products | 274.6 | 271.9 | 249.3 |
| Soap | 321.8 | 359.0 | 298.7 |

## Stein, Hall Names Whitaker Director of Laboratories

Stein, Hall & Co., textile chemicals manufacturer, New York, has appointed Lawrence W. Whitaker director of laboratories. Mr. Whitaker, who was formerly associated with the S. D. Warren Paper Company, Westbrook, Me., will direct and coordinate the work of the company's laboratories in both practical and theoretical research projects relating to the food, paper, adhesive and textile industries.

## Drackett Names Archer New England Sales Head

Bernard H. Archer has been named New England industrial sales manager of the Drackett Products Company, Cincinnati, Ohio. He will handle sales of "Azlon," a protein textile fiber, as well as industrial proteins. Before joining Drackett, Mr. Archer was with Aralac, Inc., for three years and prior to that had been with the Hat Corporation of America.

### Tapioca Flour Plant Partially Converted

S. A. Industries Reunidas de Amido Company, tapioca flour manufacturer, Brazil, has installed machinery in its plant near Sao Paulo for the conversion of a portion of its flour output into tapioca flake and pearl. Production of the flake and pearl is expected to begin in August and is expected to amount to about thirty tons per day.


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| Flash Point (closed cup) | 160°F. |
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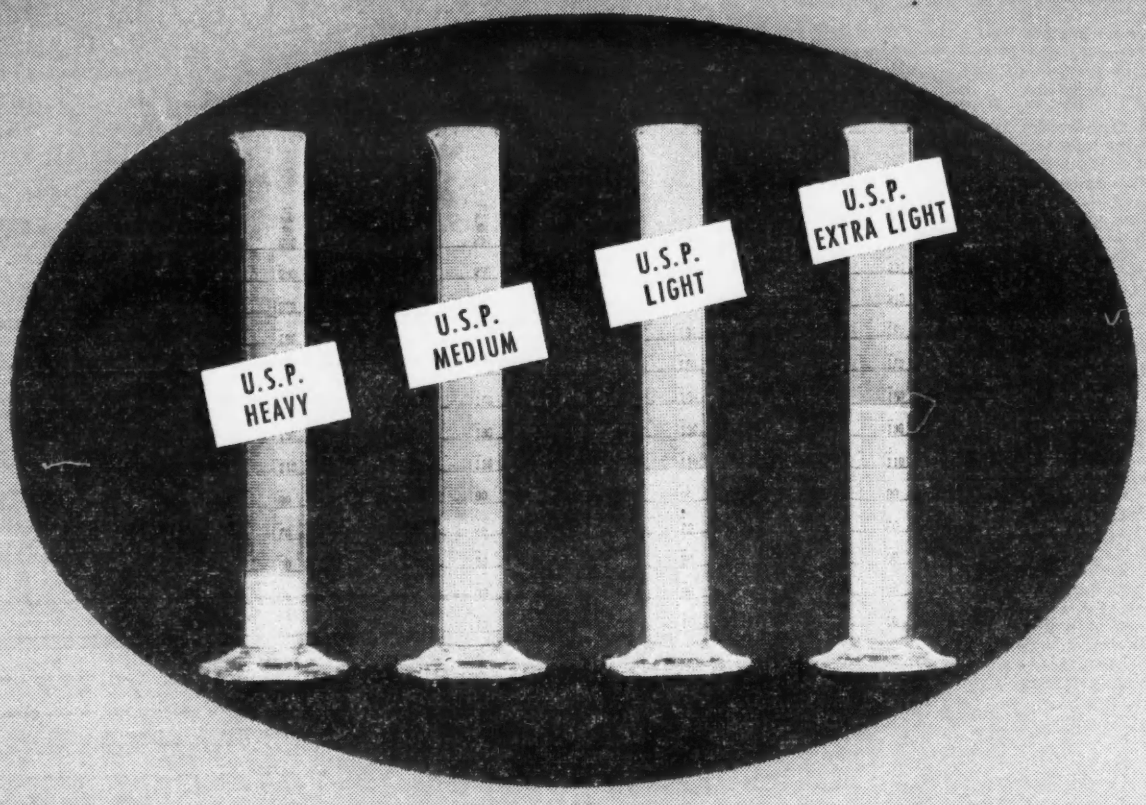


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# Drugs and Fine Chemicals

Price movements in this market were limited to a $15 per kilo rise in santonin due to advancing production costs, and to an 18 cent per pound advance in the price of cocoa butter. Menthol maintained its current price position of the past three weeks, and the indications were that in view of the situation prevailing in Brazilian and Chinese primary markets present spot prices were likely to stabilize at levels close to prevailing quotations. Alcohol continued easy, but the recent price reduction on this material had as yet not been reflected in the price structure of the ethyl ester solvents.

Because of the eased alcohol supply position as well as the seasonal off-demand from the feeding industry, blackstrap molasses moved somewhat slower than normal and was in plentiful supply at firm prices. Antipyrine remained short as also did such items as ephedrine and its salts. Castor beans were being purchased in only limited quantities on the Brazilian market due to European buying at a price level which the American market will not entertain. Codliver and fishliver oils in unsold position were in very short supply in view of the world-wide shortage of vitamin oils, caused in major part by under-production and heavy consumption for other than medicinal purposes. No relief is in prospect for the near future.

Crude iodine and the iodide salts were in ample supply at firm prices. Lithium and its salts were also holding firm under moderate demand. While most ester and alcohol solvents were said to be in plentiful supply, the ketones were virtually all in a short position. Acetone and methylethyl ketone were short, as was also methylisobutyl ketone. The latter materials were expected to become somewhat more readily available at a later date when expansion of production facilities is completed.

The market position of quinidine, after the lifting of government controls, did not experience any marked flurry in business. Quinine and its salts remained in essentially the same market position as in recent months, with prices unchanged.

The glycerin market was reported as in reasonable balance with demand, despite reduced soap manufacturing operations during the third quarter. Prices were holding firm and expected to continue so through July. Production of synthetic glycerin was tentatively scheduled to reach the stage of making deliveries by the first week in August, but since new chemical production operations are always beset with many unforeseen problem, such tentative dates are sometimes hard to meet.

The business division of the Bureau of Census reported sales of wholesale drugs and sundries for the first four months of this year at $40,236,000, an increase of 6 percent over the corresponding period of 1947. April business this year was 3 percent ahead of April last year, but off 6 percent from March, 1948. Inventories were reported 5 percent higher than one year ago as of the end of April.

**Alcohol**—The market on this item continued to show the eased position maintained in recent weeks, following the decline in prices all across the board at Mid-June by 3c. per gallon. Supplies were readily available in large quantity for prompt shipment, while the demand continued at lower than usual levels. The drop in demand was described as an overall situation stemming from a wide variety of industrial users rather than from a slump in any one particular industry.

**Antipyrine**—This material continued to be critically short at firm prices on contract. Virtually all material being produced was committed, and very little spot material was available which was reported to be bringing a premium over regular market levels.

**Brucine**—This material was moving in reasonable quantities in a market characterized by a firm price structure. The alkaloid was currently quoted at 40c. to 50c. per ounce in 100 ounce lots, while the sulphate ranged from 30c. to 40c. on the same basis.

**Camphor**—Ample supplies of this material was available under moderate demand from the pharmaceutical industry for the USP grade. Demand for tablets was holding up well, while there was some indica-

## *Market Trends*

**Prices Advanced**

Cocoabutter, 18c. per lb.
Santonin, $15 per kilo.

**Prices Reduced**

None

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 260.5 | 260.5 | 254.8 | 252.5 |

*(For Current Prices see Page 9)*

tions of a slower demand for bulk shipment. Powdered and granular material held firm to the quotations of 66c. per pound in 2,000 pound lots, with the usual differentials prevailing on smaller quantities.

Technical material was in strong demand, particularly from the photographic industry, while prices held firm to levels maintained over recent months.

**Castor Oil**—Medicinal grades of oil were moving in moderate quantities against a slow but steady demand from the pharmaceutical industry. The castor bean market, from the American standpoint was at a quite low ebb because of the conditions prevailing at the prime markets in Brazil where European buying was currently being made at price levels which the American market would not support. Current quotations were nominally in the range of $140 to $145 per long ton.

Imports last week totaled 2,683 bags equivalent to 402,450 pounds arriving at New York, compared with 2,345 bags, or 351,750 pounds the previous week. One year ago imports stood at 44,988 bags equivalent to 6,748,200 pounds.

Total arrivals so far this year amounted to 611,422 bags, or 86,713,300 pounds, compared with arrivals during the corresponding period of last year totaling 866,961 bags equivalent to 130,044,150 pounds.

**Cocoa Butter**—This material in a strong market moved upward in price last week to levels of 96c. per pound in carlot quantities and fractionally higher for smaller quantities to a level of 97c. for lots up to 1,000 pounds. This was a rise of some 18c. per pound over levels prevailing in recent months.

**Codliver Oil, USP**—A strong market situation existed on this item generally because of insufficient supplies to meet the overall demand. The current requirements for feed purposes were normally low by virtue of the season of the year, but the pharmaceutical demand was said to be good and likely to continue so because of the world-wide shortage of vitamin oils. Prices were firm and unchanged from levels maintained in recent weeks. No change was expected in the immediate future.

New feeding grounds for cod fish are rarely discovered at the present time and should the unlikely occur at this time, a world-wide demand for codliver oil would readily absorb any substantial increase in production. All of which gives point to the following report concerning prospective cod fishing in Alaskan waters—something that, to the best of present knowledge, was never followed through. The report reads as follows in a trade publication the pages of which are yellow with age:

*New York, Nov. 15, 1888*—Codliver oil may at some not distant day be a profitable business enterprise in Alaska, if statements made by the officers of the U. S. Steamer Albatross be acted upon. It is said that immense quantities of this fish were discovered all along the Alaskan shores in quantities that were marvelous, and also many other varieties of fish that are used as food products. They predict wonderful business resources in the line of fish foods in these waters.

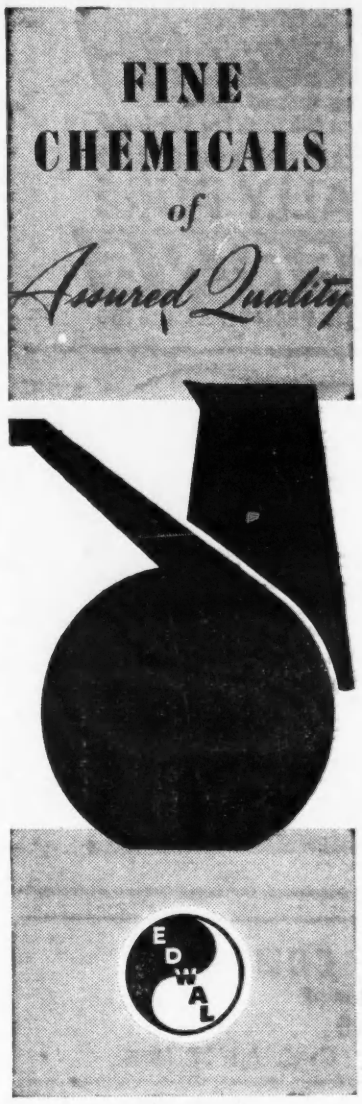
Could it be that Alaskan waters today hold possibilities for extensive codfishing and codliver oil production?

**Cream of Tartar**—Firm prices were maintained on this material last week ranging from 36c. per pound in 250 pound drums to 41 cents in 25 pound lots. Imported last week from Lisbon were 200 barrels arriving at New York.

**Ephedrine**—The alkaloid and its salts, particularly the sulphate, were still in a tight supply position with shipments running behind schedule. However, with an anticipated seasonal slackening of demand together with a somewhat better production rate, the market was expected to ease slightly in the immediate future. Meanwhile, prices were steady and unchanged from levels prevailing over recent months.

**Ethyl Acetate**—This solvent remained in plentiful supply with shipments going forward promptly to lacquer manufacturers

*For Late Market Developments, See Page 4*


**Hydrazine Sulfate, technical**

**Props:** White to cream fine crystals. Purity 95-98%; impurities: $Na_2SO_4$, NaCl, $NH_4Cl$, very low moisture content, soluble in water; insoluble in alcohol.

**Uses:** Preservation of cut flowers; a strong reducing agent in organic chemistry.

•

**Ethyl Iodide C. P. and technical**

**Props:** Colorless liquid; 95% boiling range, 70-72°C., specific gravity, 25°/25°, 1.91.

**Uses:** Introduction of the ethyl group in organic synthesis; medicinal.

•

**Isopropyl N-Phenyl Carbamate, technical**

**Props:** White to grey needles; 98% minimum purity; soluble in alcohol or acetone, very slightly soluble in water.

**Uses:** Narrow-leaf herbicide; effective against crabgrass.

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and other industrial users. Last week the price was still unchanged from that maintained over recent weeks, but in view of the recent drop in alcohol prices the feeling was expressed in some quarters that current schedules might be revised in the near future.

**Ethyl Formate**—This volatile ester used as a solvent was meeting demands from consumers with prompt shipments, and consumers were reported to be able to obtain all they needed for their requirements from a supply situation that was described as ample.

**Ethyl Lactate**—This solvent moved with prompt shipment from readily available supplies into the lacquer and other consuming industries. Prices were unchanged.

**Fishliver Oil**—Imported last week was only eight drums of shark liver oil from Argentina. This was characteristic of the low supplies of this important source of vitamin A, because the available sharks have dwindled to relatively small numbers in view of the heavy shark fishing of the past, when shark were the major source of vitamin A from fishlivers. Demand for this oil, much of which is obtained from halibut, is far in excess of supply by virture of the world-wide shortage of vitamin A currently existing.

**Formaldehyde**—The market position of this item continued to ease, not only as a result of the lessened demand stemming from the plastics industry, but also due to such factors as greater production as the result of the greater availability of methanol and also the drop in demand from export trade where purchases are being made in ever increasing quantities from nearer sources such as France and Belgium. Like all other export business, trading in formaldehyde was affected by the dollar shortage existing in Europe. Prices, meanwhile, were firm and unchanged.

**Glycerin**—The market position of glycerin was one of reasonable balance with demand, despite reduced soap manufacturing operations as a result of accumulated stocks, during the second quarter. Industrial consumers were receiving all that they needed without a tight market situation developing. Production of synthetic glycerin was tentatively scheduled for delivery in early August, but it should be borne in mind that new chemical production operations are always beset with many production problems which develop only as production gets started, and being unforeseen can frequently cause considerable delays making such tentative dates frequently hard to meet.

**Iodine, Crude**—The market position of this material was firm and unchanged from that of recent weeks. Supplies were plentiful and sufficient to meet all demands, while the price schedule of $1.729 per pound, ex warehouse, remained unchanged.

**Lithium Salts**—The market for these materials was generally steady, holding to a firm price position. The bromide was quoted at $1.90 per pound in barrels, works, freight equalized. The NF carbonate ranged from $1.10 to $1.15 per pound, while drum quantities of the chloride could be had for $1.15. Lithium citrate was quoted in drums as low as $1.30 and prices depending upon quantity ranged upward to $1.65. Barrel quantities of the fluoride were maintaining levels of $1.95 while the hydroxide ranged from $1.15 to $1.25.

**Menthol**—The feeling was expressed in most quarters that the menthol market had about reached its peak and prices have maintained their current levels for the past three weeks. In view of the high cost of replacement material from Brazil and from China, it was expected that the market would settle down to levels at or only slightly below the current range. Imported last week were 94 cases of menthol arriving at New York from Santos and Rotterdam.

**Methanol**—The supply position of this material remained comfortably easier. During March, government reports issued by the Bureau of Census indicated that 7,500 gallons of methanol were exported by the United States to Korea under the army civilian supply program. Prices on Methanol in the domestic market were firm and not expected to change in the immediate future. Production of natural methanol was reported for April as 214,000 pounds, compared with a March production of 204,000 pounds, on a 100 percent basis.

**Methylethyl Ketone**—Demand for this material continued strong against short supplies, maintaining a tight market situation. Some relief was expected at a later date from new production facilities now under way. Solvent uses for this material in the lacquer and resin field has grown steadily and the item was expected to continue at a high rate of production.

**Methylisobutyl Ketone**—Firm prices in the face of an overall shortage characterized the tight market position on this item. It was anticipated that the tight market situation would be relieved in the not too distant future by expanded production facilities.

**Methylene Blue, USP**—This medicinal dye was amply available to meet all demands with prompt shipment in an easy market in which price levels were being maintained unchanged from those of recent weeks. In lots of 100 pounds or more, the crystalline or powdered material was quoted at $2.42 per pound, ranging upward to $2.57 for small lots of 25 pounds.

**Molasses, Blackstrap**—The current quotations on this material stood at 26½c. to 27c. per gallon in tankcars. Supplies were reported as good with shipments prompt. Demand was steady but somewhat below normal by virtue of the easy alcohol market position and the off-season feeding demand. Currently, there is less feeding of animals during the season when they are turned out to pasture, and demand from the feed industry was not expected to strengthen much before early Fall. De-

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mand from the fermentation alcohol industry was eased because of a lesser demand currently existing from the chemical industry for alcohol, but this situation due in part to heavy inventories was expected to improve in the near future. The always mild but steady demand from the pharmaceutical industry and for the manufacture of citric acid remained unchanged.

It was estimated that Cuban production of blackstrap molasses this year would run around 200,000,000 gallons. The sugar crop is heavy. Refiners blackstrap was moving competitively with the Cuban grade.

**Nicotinic Acid, USP**—This important member of the vitamin B complex, pyridine 3-carboxylic acid, held to the levels established last month of $6 per kilo, in lots of 50 kilos or more, following an upward price adjustment of $1. Supplies were in a quite good position and shipments were being made with reasonable promptness.

**Nicotinamide, USP**—The 50 kilo bulk price of this material was maintained at $9.50 per kilo, and was reportedly in good demand from the pharmaceutical industry, somewhat at the expense of the acid for direct administration because of a claimed more mild accompanying aftereffect. The market was described as stable and not likely to change in the immediate future. The hydrochloride was reportedly moving in good volume for the preparation of multivitamin compounds.

**Quinine**—Shipments of the alkaloid were reported as unsteady and the market in general had not as yet settled down to a stable normal condition. Prices, however, on the alkaloid and its salts remained firm. In 100 ounce lots, the alkaloid continued to be quoted at 1.00 per ounce. The acetate remained off the market and most outlets were maintaining no stocks on the arsenate, which was nominally priced at $1.30 per ounce. The arsenite was no longer on the market so far as current offerings were concerned. USP Bisulphate was priced at 73c. unchanged from levels prevailing over recent months. Quinine citrate was not available, while the dihydrobromide was only nominally quoted at $1 per ounce. Both the hydrobromide and the hydrochloride, however, were available at 91c. per ounce; and the dihydrochloride was being quoted at $1. The ethyl carbonate remained on a nominal basis at 95c. per pound. The hydroiodide was no longer being manufactured and stocks were deleted. Quoted on a firm basis was the hypophosphite at $1.40 per ounce in 100 ounce lots, and the phosphate at $1.10. The salicylate held to its level of 95c., while quinine sulphate moved in good volume at 80½c.

No longer being offered, for the present, was the sulphocarbolate, and while a nominal quotation of 60c. was being maintained on the USP tannate, it was virtually unavailable. The quinine salt of tartaric acid, like the citrate, had disappeared from stocks and was not currently being replaced by manufacturers. The quotations per ounce on the valerate remained unchanged from previous quotations of $1.25 per ounce. N.F. quinine-urea hydrochloride was firm at 97c. per ounce. There was no indication that the current unsettled supply position, or the price structure on these materials would be changed in the immediate future.

**Santonin**—The price position of this material moved upward to levels of $190 to $200 per kilo in a market of very limited supplies and strong demand. The tight supply position was expected to continue for some time to come. The rise in price was due to increased costs of production.

**Silver Nitrate**—The market on this item remained firm in about the same steady position that has been maintained over recent months. On a 100 percent basis, production was reported for April by the Bureau of Census as 4,167,000 ounces, compared with 4,953,000 ounces in March and 3,974,000 ounces in April of last year.

**Sodium Phospate, Dibasic**—April production of this material took a drop to 7,045 short tons, according to the Bureau of Census, under the March figure of 8,546 short tons. The market was generally reported as steady and maintaining a firm price position.

**Quinidine**—It was interesting to note, following the information published in these columns some weeks ago of the lifting of government restrictions on the subject material, that the market in the meantime has shown no indications of any flurry in business as a result of heavy demand; such as those who maintained that controls were necessary, indicated that there would be. Producers were inclined to feel that the situation would continue on a normal basis and that the supposed big pent-up demand did not exist in fact. Prices were unchanged.


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## Research Heads Discuss Report Writing Systems

At a recent dinner meeting of the Association of Research Directors at the Holley hotel, New York, Dr. C. O. Tongberg, assistant director of research of the research division of the Standard Oil Development Company, addressed the members on the subject of "An Adequate System of Report Writing Within a Research Organization." In his talk, Dr. Tongberg covered the importance of writing good reports, the frequency with which reports should be written, the problem of who should write the research reports, the training of technical men to write good reports, and the various techniques employed in writing effective reports.

He stressed the importance of an adequate system of report writing, especially for larger research organizations. A good report system, he said, allows transmission of research data promptly to a relatively large number of people within an organization, serves to keep management advised promptly of new developments and situations, and serves as a means of maintaining an effective legal record of the work done. It affords to management a means of evaluating critically the status of research problems, and it makes the research man view his work more critically, he added.

The importance of having reports well written was stressed. It was pointed out that a clear, concise report conserves the time of the reader, which is an important consideration in an organization wherein reports are read by many people. Furthermore, a technical man has a much better chance of selling an idea or convincing management of some point if a good report is written. On the other hand, the best research job may lose a considerable part of its value if the report poorly presents the data to management.

## Squibb Assigns Three To New Sales Posts

E. R. Squibb & Sons, New York, has appointed Paul A. Freeman general manager of E. R. Squibb & Sons of Canada, has named James T. McAloon to succeed Mr. Freeman as division sales manager in Chicago, and has promoted O. J. Phillips to Mr. McAloon's former position as division sales manager in Philadelphia.

Mr. Freeman joined the Squibb organization in 1936 as professional products representative and was made a district sales manager three years later. In the following year he became division sales manager in Seattle and was transferred to Chicago in 1945. Prior to joining Squibb he was associated with the Bartel Drug Company, Seattle.

Mr. McAloon was sales representative for the company in Nebraska, Missouri, Colorado and California before being appointed district manager in the San Francisco area in 1941. Two years later he was named manager of the San Francisco sales division and last year was appointed division manager at Philadelphia.

Mr. Phillips joined the company in 1941 and carried out sales assignments in Macon, Ga., Memphis, Tenn., and Asheville, N. C., before being appointed professional service director of the Philadelphia division last year. As division manager in Philadelphia he will be responsible for sales in southern New Jersey, eastern Pennsylvania, Maryland, Delaware, Washington, Virginia and part of northeastern North Carolina.

## Schering Assigns Murphy To Foreign Sales Post

Schering Corporation, pharmaceutical manufacturer, Bloomfield, N. J., has assigned Edward Murphy to a post as supervisor of its activities in Italy. The action came after a meeting of members of the company's foreign sales division, in which Mr. Murphy participated with Edward Libber, Mediterranean area supervisor, and Dr. Miguel Angel Mendoza, medical supervisor of the foreign sales professional service representatives.

### OIT Publishes Fifth List Of Government Inventions

The Office of Technical Services has published a fifth list of government-owned inventions suitable for foreign patent filing. Included on the list is an iodine-liberating, water-purifying capsule; a process for maintaining the strength of influenza vaccines; three discoveries concerning subtilin; several advances in plasticizers, and developments in nickel recovery and the electrodisposition of manganese.

The agency said that American manufacturers are invited to contribute to the cost of filing foreign patent applications, and added that licenses granted under foreign patents are available to American business on a royalty-free, non-exclusive basis. A copy of the list of inventions may be obtained from John C. Green, director, Office of Technical Services, Department of Commerce, Washington 25, D. C.

## New York AIC Chapter Elects Meyer Chairman

Martin Meyer, of Brooklyn College, was elected chairman of the New York chapter of the American Institute of Chemists at a recent meeting at the George Washington hotel, New York. Others elected were:—Lincoln T. Work, Metal & Thermit Corporation, vice-chairman; Maurice J. Kelly, Nopco Chemical Company, secretary-treasurer; Karl M. Herstein, Herstein Laboratories, Inc., national representative, and Joseph T. Baschour, Stauffer Chemical Company, and Albert F. Guiteras, Foster D. Snell, Inc., councilors.

Student medals, for recognition in leadership, scholarship and character, were awarded to: Gert Ehrlich, Columbia University; Martin Epstein, College of the City of New York; Martin Grayson, New York University; Eric B. Hotelling, Rutgers University; Raymond Kurkjy, Fordham University; David Taber, New York University; Arthur F. Wagner, Princeton University; Sanford Weil, Brooklyn College, and Robert W. Zwanzig, Polytechnic Institute of Brooklyn.

## Tariff Commission Preparing New Import Duty Rates Book

The United States Tariff Commission is preparing to publish a compilation of all the import duties of the United States in effect as of June 15, 1948. The publication will contain a restatement in tabular form of all of the duty provisions of the Tariff Act of 1930, with the original language and rates modified to show the current duties.

It will also contain a list of products subject to import taxes under the Internal Revenue Code and information regarding special and additional duties, as well as special exemptions from duty. The document is expected to be released within two weeks and will be available at $2 per copy. Orders, accompanied by remittance, are currently being accepted by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

## Dr. Papadakis Heads Omaha ACS Section

Dr. Philippos E. Papadakis, associate professor of chemistry at Creighton University, has been elected chairman of the Omaha section of the American Chemical Society, succeeding J. Leslie Hale. Eugene T. Drake, of the Cudahy Packing Company, Omaha, was elected vice-chairman, and Dr. Nell Ward, head of the chemistry department of the University of Omaha, was re-elected secretary-treasurer.

### Cass Products Co. Making New Vacuum Filling Machines

Cass Products Company, Buffalo, N. Y., is now producing vacuum fillers in three bench models and ten semi-automatic straight line models for filling bottles and cans. The machines will handle any size or shape from one ounce to one gallon, with a maximum capacity of five one-gallon bottles per filling. The machines are said to feature controllable vacuum, automatic drain, automatic oiling, quick break vacuum and full stainless steel table tops, and can be fitted to suit customer requirements.

### Winthrop-Stearns Names Bowman To Head New Dallas Branch Office

Winthrop-Stearns, Inc., New York, has appointed M. T. Bowman to manage its new branch in Dallas, Tex., when that facility is completed. The new branch, which will be a warehouse and shipping point for Texas, Oklahoma, New Mexico, Arkansas and Louisiana, is expected to be finished about August 1. Mr. Bowman has been associated with the company since 1937.

### Upjohn Staffs Hear Dr. Spies

The personnel of the research and medical divisions of the Upjohn Company, Kalamazoo, Mich., were addressed by Dr. Tom D. Spies at a recent meeting. Dr. Spies discussed scientific progress made on nutritional deficiency diseases and their treatment and devoted some time to a discussion of folic acid and vitamin B12.

## World Pharmacopoeia Group Accepts Fifty-eight Listings

The expert committee on the unification of pharmacopoeias of the World Health Organization accepted fifty-eight draft monographs on important drugs at its recent meeting in Geneva, Switzerland. Time limitations allowed the committee to consider only seventy-one of the 159 draft monographs submitted, and it postponed action on eleven, while the remaining two were withdrawn.

The group agreed that proprietary drugs should be included in the international pharmacopoeia, and decided that a list of usual and maximal doses should be prepared. For this purpose, it was decided that the advice of the medical profession should be sought and presented to the next meeting of the committee.

The committee postponed action on the question of doses for children, but agreed that in the case of injection the route of administration should be specified. Further progress was also reported toward setting up a unified system of nomenclature to provide that the same name should represent a drug of the same potency and composition in all countries.

Presiding at the meeting was the committee's chairman, Dr. C. H. Hampshire, secretary of the British Pharmacopoeia Commission. In attendance were:—Prof. H. Baggesgaard-Rasmussen, chairman of the chemical division, Danish Pharmacopoeia; Prof. E. Fullerton Cook, chairman of the committee of revision, United States Pharmacopoeia; Prof. I. R. Fahmy, professor of pharmacognosy, Faculty of Medicine, Cairo, Egypt; Prof. H. Fluck, professor of pharmacognosy, Eidgenossische Technische Hochschule, Zurich, Switzerland, and Prof. D. van Os, chairman of the Netherlands Pharmacopoeia Commission.

## Temple University Plans Pharmacy Building Opening

Temple University, Philadelphia, plans to open the new building housing its school of pharmacy next fall with a two-day program of exercises and symposia on pharmaceutical education, research, community service and distribution.

In the morning session of the opening day's program, J. Lester Hayman, president-elect of the American Colleges of Pharmacy, will preside over a discussion on "Education for Professional Service." The panel for the discussion will be composed of educators in the pharmacy field and pharmaceutical and laboratory technicians. In the afternoon of the same day, a symposium on the subject of education for manufacture and distribution will be presided over by Dr. Ernest Little, president-elect of the American Pharmaceutical Association.

## Ernst Bischoff Making New Research Compound

Ernst Bischoff Company, Ivoryton, Conn., is now producing adenosine-5-phosphoric acid under the trade name "My-B-Den" in quantities said to be sufficient to insure adequate supplies for the institution of clinical investigations as well as for the continuation of biochemical and bacteriological studies of enzyme systems and bacterial metabolism.

## Pinsince Gets Export Post

Ayerst, McKenna & Harrison, Ltd., subsidiary of American Home Products Corporation, New York, has appointed Adrian J. Pinsince jr. assistant export manager. Mr. Pinsince, who will make his headquarters in New York, was formerly associated with Wyeth International and prior to the war was connected with the Gelatin Products Company.

## *Trade Briefs*

**Clifford Dixon,** vice-president of William S. Gray & Co., chemical merchant, New York, has arrived in Europe on a business trip.

**Foster D. Snell,** Inc., consulting chemist and engineer, New York, has published a bulletin describing the facilities and functions of its physical measurements and product evaluation department.

**Dr. Fuller Albright,** associate professor of medicine at the Harvard Medical School, has been awarded the Squibb Award of the Association for the Study of Internal Secretions for 1948.

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## Pennsalt Assigns Beaver To Newly-Created Post

Pennsylvania Salt Manufacturing Company, Philadelphia, has named John W. Beaver sales representative for its special chemicals division in the newly-created Maryland, Washington and Virginia district. Mr. Beaver, who has been with the company since 1946, was formerly its sales representative in the Wisconsin territory.

## Western Conn. ACS Elects Wing Chairman

Dr. Henry J. Wing, director of research of the Northam Warren Corporation, Stamford, Conn., has been elected chairman of the western Connecticut section of the American Chemical Society. He succeeds Dr. Richard O. Roblin, Jr., director of the chemotherapy division of the American Cyanamid Company, Stamford, who was named a director of the section.

Jack T. Thurston, of American Cyanamid Company, was chosen chairman-elect, and Charles L. Morris of the same company and Arthur H. Neeley of the Air Reduction Company, Stamford, were re-elected secretary and treasurer, respectively.

Other directors elected were Frederick R. Balcar of Air Reduction and Leslie C. Lane, Jr., of American Cyanamid. Dr. Jack T. Cassaday of the latter firm, a director of the section last year, was named to the national council of the society, succeeding Dr. William C. Moore. Other section members on the council are Dr. E. H. Northey of American Cyanamid and Dr. R. Bowling Barnes of the American Optical Company, Stamford.

## Rossini Gets Honorary Degree From Carnegie Institute

Dr. Frederick P. Rossini, chief of the thermochemistry and hydrocarbons section of the National Bureau of Standards has been awarded an honorary degree of doctor of science by the Carnegie Institute of Technology. Dr. Rossini joined the National Bureau of Standards in 1928 and was appointed chief of the thermochemistry and hydrocarbons section in 1936.

## OIT Places Israel In Country Group O

In accordance with the President's recognition of Israel as a separate state, the Office of International Trade has included it in its country group O classification. All general license privileges applicable to group O destinations have been extended to include Israel.

## Brush Honored by Temple Univ.

Alvin G. Brush, chairman of the board of American Home Products Corporation, New York, was recently awarded an honorary degree by Temple University, Philadelphia, in recognition of "the inspiration his business career affords today's graduates." In making the award, Mr. Brush's career was traced from his first position in the office of the Long Island Railroad to his present place at the head of the American Home Products Corporation.

## Agicide Labs. Plans New Building

Agicide Laboratories, insecticide manufacturer, Los Angeles, Calif., is planning the construction of a new warehouse building at 4949 Bandini boulevard in that city. The structure will contain 10,000 square feet of floor space and is expected to cost approximately $25,000.

## *Italian Chem. Trade with U.S.*

**Italian Imports in 1947**

| | Kilos |
|---|---|
| Animal oils and fats, industrial | 270,600 |
| Asbestos, crude | 855,800 |
| Bituminous solids and residue | 74,665,700 |
| Black pigments | 8,435,400 |
| Calcium carbide | 1,355,300 |
| Casein | 55,600 |
| Celluloid, cellophane, bakelite, etc. | 137,000 |
| Chemicals, fertilizers, phosphatic tons. | 2,559 |
| nitrogenous tons. | 10,223 |
| potassic tons. | 1,458 |
| inorganic | 2,057,700 |
| organic | 3,277,800 |
| Colors, lakes, varnishes | 324,800 |
| Copra | 4,755,200 |
| Egg yolk, dried or liquid | 418,500 |
| Ethyl alcohol hectoliters. | 7,311 |
| Gas oil | 176,210,000 |
| Gasoline | 187,658,700 |
| Glue for papermaking | 11,919,000 |
| Graphite | 355,700 |
| Gums, resins, and balsams | 6,047,700 |
| Inks | 182,900 |
| Lubricating oils | 133,169,400 |
| Medicinal plants | 534,500 |
| products, synthetic | 22,043 |
| Mica | 35,000 |
| Mineral soaps | 345,200 |
| spirits | 20,810,400 |
| Naphthalene and derivatives | 190,700 |
| Oilcake | 5,983,500 |
| Oilmeal | 17,030,160 |
| Oilseeds, edible, others | 6,902,200 |
| Olive oil, edible | 24,200 |
| Paraffin and petrolatum | 11,274,000 |
| Petroleum | 62,484,100 |
| Petroleum oils, crude | 220,896,300 |
| Petroleum residue | 604,493,900 |
| Pharmaceutical preparations | 732,100 |
| Phosphatic minerals tons. | 21,894 |
| Potato starch, flour | 274,500 |
| Quinine and other alkaloids | 8,407 |
| Sodium nitrate, crude tons. | 31,347 |
| Tar oils | 5,236,400 |
| Turpentine oil | 522,300 |
| Vegetable oils, edible | 1,072,600 |
| industrial | 2,768,900 |
| Wax, crude | 113,000 |

**Italian Exports in 1947**

| | Kilos |
|---|---|
| Chemicals, organic | 61,200 |
| Dextrin, sizings, etc. | 152,000 |
| Earth colors | 443,800 |
| Essential oils, essences | 61,200 |
| Medicinal plants | 255,900 |
| Olive oil, edible | 1,285,200 |
| Quicksilver | 51,700 |
| Sulphur, crude, refined, flowers | 1,007,300 |
| Sumac | 614,100 |
| Talc | 8,564,000 |
| Tartar, crude | 2,117,700 |
| Tartaric acid | 112,000 |

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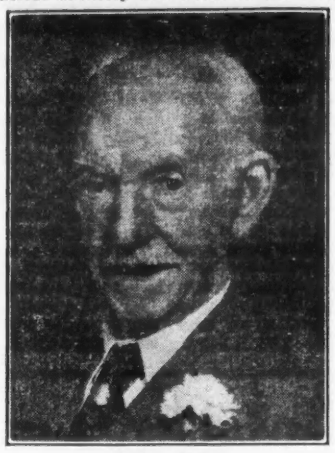
# Obituaries

Arthur Colton, internationally acclaimed inventor and manufacturer of machinery and packaging equipment for the pharmaceutical industry and head of the Arthur



Arthur Colton

Colton Company, died recently in Detroit, Mich. He was eighty-nine years old.

A native of London, Mr. Colton came to this country in 1831 and formed a partnership in 1884 in Detroit which terminated in the organization of the Arthur Colton Company. Mr. Colton was responsible for the invention of custom designed automatic pill machines, as well as automatic capsul and tube filling machines.

### F.S.Dickinson

Fairleigh S. Dickinson, one of the original partners in the surgical and medical supply firm, Becton, Dickinson & Co., died June 23 in his home in Rutherford, N. J. Mr. Dickinson, who was eighty-four years old, with Maxwell W. Becton, founded the instrument firm in New York in 1897. Later it was moved to Rutherford. He was its president at the time of his death. The Fairleigh Dickinson College, a business school, also was founded by him.

### Seth B. Hunt

Seth B. Hunt, retired vice-president and treasurer of the Standard Oil Company of New Jersey, died last week in New York hospital, New York. He was seventy-seven years old.

Mr. Hunt joined the domestic trade department of the Standard Oil Company in 1894 at Providence, R. I. He successively served as salesman, purchasing agent and refinery plant manager before being elected a member of the board of directors in 1914. He was named treasurer in 1916 and vice-president in 1919, and held both positions until he retired in 1933.

### Robert S. Newbold

Robert S. Newbold, president of the General Coated Products Company, paper processing firm, Paterson, N. J., died June 17 in New Rochelle hospital, New Rochelle, N. Y. He was sixty-two years old.

Before becoming head of the paper processing company, Mr. Newbold had been president of General Felt Products, Inc., Brooklyn, N. Y., and was formerly vice-chairman of the board of the Standard Cap & Seal Company, New York.

### H. Lester Paddock

H. Lester Paddock, chairman of the board of directors of the Oswego Falls Corporation, pulp and paper mill operator, Fulton, N. Y., died June 22 in St. Joseph's hospital, Syracuse, N. Y. He was eighty-eight years old.

Mr. Paddock was also chairman of the board of the Sealright Company, manufacturer of containers and milk bottle closures. He started in the paper industry late in the last century with the Lakeside Paper Company, Skaneateles, N. Y. He was one of the incorporators of the original Oswego Falls Pulp & Paper Corporation and served as its president and general manager for forty years until he retired as operating head and became chairman of the board.

### E. A. Throckmorton

Edgerton A. Throckmorton, president of the Container Testing Laboratories, New York, Chicago and San Francisco, died recently in Chicago of a heart attack. He was forty-six years old. Mr. Throckmorton was formerly vice-president in charge of development of the Container Corporation of America and was chairman of trade standards of the Packaging Institute.

**Edgar Bogardus**, assistant to the vice-president in charge of sales of the Standard Oil Company of Indiana, died June 21 at his home in Chicago. His duties with the oil company were as specialist on prices and sales volume. Mr. Bogardus joined Standard Oil in 1890 and for many years was its traffic manager before being made assistant to the vice-president in 1920.

**E. Harold Brayer**, president and treasurer of the Rock Asphalt Company, Buffalo, N. Y., died June 24 in that city. He was forty-eight years old. Mr. Brayer was formerly chief executive officer of the Great Lakes Transit Corporation.

**Daniel Carr**, an employee of Refined Syrups & Sugars, Inc., Yonkers, N. Y., died June 19 in Yonkers General hospital. He was forty-five years old. Before becoming associated with the sugar and syrup concern, Mr. Carr had been employed by the Standard Oil Company.

**Dr. Francois E. Matthes**, retired geologist of the United States Geological Survey, died recently at his home in El Cerrito, Calif. He was seventy-one years old. Dr. Matthes had been with the geological survey for fifty-one years when he retired last year.

**Henry H. Rogers jr.**, son of the late Col. Henry H. Rogers, Standard Oil Company executive, died June 21 in Los Angeles, Calif. He was forty-two years old.

## USI Plans Major Plant Expansion

U. S. Industrial Chemicals, Inc., New York, is planning the expenditure of approximately $7,000,000 for plant expansion during the current fiscal year, according to its annual report issued last week. Major projects contemplated during 1948 include a new chemical plant at Brownsville, Tex., and new storage and handling facilities at Garden City, Kan. Both facilities are planned for the handling and conversion of synthetic chemicals to be purchased from the Stanolind Oil & Gas Company.

## Lederle Laboratories Discontinues Cereal Line

The Lederle Laboratories Division of the American Cyanamid Company, Pearl River, N. Y., will discontinue the manufacture, sale and distribution of "Cerevim" pre-cooked cereal on July 1. After that date the manufacture, sale and distribution of the product will be handled by Pepperidge Farm, Inc., Norwalk, Conn.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# AEC Medical Program Described in Detail

The medical program of the Atomic Energy Commission was described in detail last week by Dr. Shields Warren, director of the commission's division of biology and medicine at an isotopes symposium held as part of the annual meeting of the American Medical Association in Chicago.

Dr. Warren's talk went into the history of radioactive isotopes in the medical profession, and detailed the four parts of the commission's medical program. He said, in part:—

"As a result of the atomic bomb in Japan, the Bikini test and the lowering clouds of war, it is natural that we think of atomic energy in terms of mass destruction, mass destruction cheaper and more efficient than any other than envisaged. However, like the old coin with the eagle and clutched arrows on one side and the head of Liberty on the other, this picture of atomic energy has a fair and forward looking obverse. What atomic energy may bring about in the way of development of power and of heat, what it may do in the propulsion of ships or aircraft remains all but hidden in the mists of the future. What it means as a provider of research tools is at present as overwhelming as a streamliner rushing down upon a grade crossing.

"In any consideration of radiation it is important to remember that ionizing radiation may affect the body in two ways, first as external radiation, as from the conventional x-ray tube, and second, as internal radiation as from the administration of radioactive phosphorus.

"The various ironizing radiations affect cells qualitatively in similar fashion. There is no way that one can tell by examination of a cell or tissue whether the radiation effect seen has been produced by neutrons, by 200 KV X-ray or by the gamma rays of radium. The predominating effect is assumed to be through interference with the nucleic acid metabolism of the cell. External radiation in passing through the body has an almost equal chance of being absorbed by the various cells with which it comes in contact. The quantitative variation that these cells show in response hinges chiefly on their inherent sensitivity to irradiation. In internal radiation, on the other hand, because of the specific affinity of certain tissues for specific elements, as, for example, bone and phosphorus, or thyroid and iodine, and because of the relatively short range of many of the types of radiation emitted by the various isotopes, there can be some degree of selective localized radiation.

**Radioactive Therapy Discussed**

Radioactive isotope therapy attempts to take advantage of these selective localizations. In determining the therapeutic value of any radioactive isotope there are several factors to be taken into consideration: first, the inherent toxicity of the substance itself; thus, strontium, which might be useful because of its high toxicity to bone marrow. Second, the half-life of the material: material which has a long half-life is much more dangerous from the standpoint of possible excessive radiation than one with short. On the other hand, problems of shipment and preparation of the material for administration demand a certain amount of time, and material with too short half-life would not be satisfactory. Third, the degree of localization, for example: radioactive sodium is relatively limited in use because of the very high degree of diffusibility of the sodium ion. Fourth, range and type of radiation which tends to limit the region effectively irradiated to the vicinity of localization. Fifth, the element must be such that its specific activity can be reasonably high, preferably in the order of one millicurie per milligram of element. Thus, radioactive calcium with a half-life of forty-five days might be a fairly suitable material from the therapeutic standpoint; however, the specific activity of calcium is relatively low and consequently, it is difficult to get an effective concentration of the isotope at a desired point. There are relatively few substances that fulfill all these desirable criteria.

"There is also an important set of variables from the standpoint of the lesion to be treated. First, the lesion must be one that may be satisfactorily treated by ionizing radiation, that is, its cells must be responsive to radiation; second, there must be a fair differential between the sensitivity of the abnormal and the normal cell of the part.

"In the light of these limitations, it is not surprising that only a few isotopes among those thus far tried have been useful from the standpoint of therapy. These are radioactive phosphorus in the case of polycythemia vera, and some leukemias; iodine$_{131}$ in rare carcinomas of the thyroid and gold$_{199}$ in some malignant processes where either direct injection into the tumor is utilized or the selective uptake of colloidal substance by the reticuloendothelium system is of value.

**Four Point Program Outlined**

"The medical program of the Atomic Energy Commission may be divided into four parts. First, the maintenance of health of the workers of the Commission and its contractors. Thus far, the health and safety record is an enviable one, and speaks highly for the foresight of those who set the initial standards of safety and permissible dose levels for exposure to ionizing radiation. Second, the protection of environmental health. This involves such problems as waste disposal, possible contamination of surrounding areas and the like. Third, the development of basic

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### *Ziegler Technical Head*

Carl E. Hillers has been appointed technical director of G.S. Ziegler & Co., manufacturer of gilsonite, asphalt and pitch products, New York. Formerly Associated with Certain-Teed Products Company, Sloane Blabon Corporation, and more recently with Flintkote Company as research director of its Tile Tex Division, Mr. Hillers joined Ziegler a year ago to set up a research division in connection with pitch plasticizers for the asphalt tile industry.

research in those problems peculiarly related to atomic energy, of which the effect of ionizing radiation on the plant, animal and human cell, both isolated and aggregated into organisms, must be determined. Such problems as permissible dose levels of ionizing radiation, metabolism of new or rare elements, the mechanism of radiation injury, the development of therapy for such injury, the character and mode of development of hereditary changes due to ionizing radiation are among those of basic importance. Fourth, the exploration of what, if any, values the new sources of energy available at the installations of the Atomic Energy Commission themselves and the value that very short-lived radioactive isotopes may have in cancer research and cancer therapy.

"An important aspect of the cancer research program is the provision free of the isotopes thus far established as most definitely of value, namely phosphorus$_{32}$, iodine$_{131}$, and sodium$_{24}$, for cancer research and cancer therapy. It is hoped that this list may later be enlarged to cover other important materials. Cobalt$_{60}$ is receiving very careful consideration at the present time. It is of special interest, owing to the fact that the gamma radiations from cobalt are essentially the same as those from radium since cobalt has a moderately long half-life of 5.3 years, and since it is nontoxic as an element its use offers certain definite advantages. Of particular importance is the fact that it is not an alpha particle emitter and is not stored indefinitely in bone as in the case of radium and radon.

"Finally, since no program can hope to be better than the personnel by which it is being implemented, training plays a very important part. To this end and to partly compensate for the dearth of scientific personnel due to the war, a fellowship training program is being developed in the medical and allied sciences. This training program, administered by the National Research Council for the Atomic Energy Commission, provides up to 100 predoctoral fellowships annually and seventy-five postdoctoral fellowships annually in the life sciences."

**Medical Profession's Responsibility**

Lewis L. Strauss, member of the Atomic Energy Commission, addressed the members of the association on the relative responsibility of the commission and the medical profession in the development of atomic energy as an aid to medical progress. In the course of his talk he said:—

"The development of atomic energy as a military weapon through our unique engineering and scientific competence poses to medicine new and rather fearful questions. The existence of radiation hazard on a large scale is a threat to life, to health, to reproduction, and to posterity. How to handle it is a medical problem, both in theory and in practice. It is timely and proper that the American Medical Association should consider certain aspects of atomic energy control which confront the nation and which specifically face the Atomic Energy Commission, the nation's deputy in this field.

"These problems concern medicine as a science and men of medicine as individuals, not only because of questions of health in time of war, but also because of certain social and administrative matters which surround the use of atomic energy in peace. These latter difficulties were originally faced by medicine as a discipline and have been solved by medicine in a peculiarly gratifying and exemplary way. I refer to the solution of such problems as useful cooperation between public and private agencies, the subordination of private interests for public good, the voluntary collaboration of scientific men to forward common and predominantly lay interests. Finally, and most important as an example, is the ability of men of medicine to unite for the attainment of practical ends through the scientific method and to be able to do this without loss of scientific freedom to continue undirected individual search for new concepts.

"Once the title to atomic energy is established in the public domain, the delegates of the public must decide how to handle this force in the public interests. Three factors seem to bear on this decision. First, what is needed? Second, what is practicable? Third, what is expedient?"

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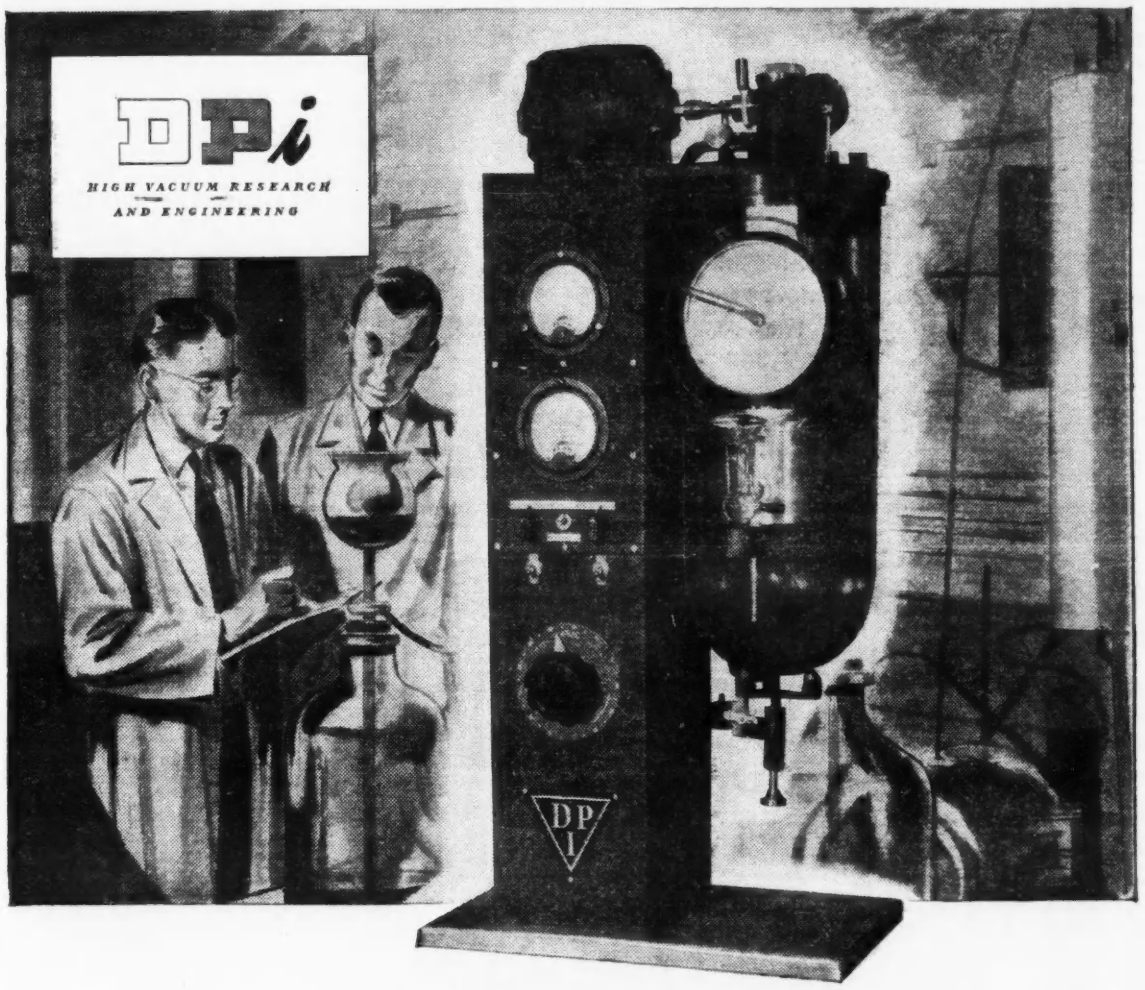


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# *Industrial Application of Chemicals*

*—Continued from page 7*

2248491) in coating compositions used for protecting and decorating various kind of articles.

**Paint, Varnish, and Lacquer**—Plasticizer (U.S. 2248491) in paints, varnishes, lacquers, enamels, and dopes.

**Paper**—Plasticizer (U.S. 2248491) in compositions used in the manufacture of coated papers and as coatings for protecting and decorating articles made of paper or pulp.

**Rubber**—Plasticizer (U.S. 2248491) in coating compositions used for decorating and protecting rubber products.

**Stone**—Plasticizer (U.S. 2248491) in coating compositions used for decorating and protecting artificial and natural stone.

**Textile**—Plasticizer (U.S. 2248491) in compositions used in the manufacture eof coated fabrics.

**Wood**—Plasticizer (U.S. 2248491) in compositions used as protective and decorative coatings on woodwork, plastic compositions used for many filling and repairing purposes on wood.

## Citric Acid Diglycolesters

**Resins**—Starting point (Germ. 712002) in making hard resins, which do not melt, by condensing with citric acid and treating with a small quantity of aldehyde or a substance yielding aldehyde in the warm.

## Cyclohexane

**(Hexahydrobenzene)**

**Bituminous Products**—Solvent for bitumens.

**Cellulose Derivatives**—Solvent for ethylcellulose.

**Chemical**—Organic compound useful in liquid-phase hydrogenation operations, syntheses of organic chemicals.

Saturated cyclic hydrocarbon which distils without decomposition, is miscible with most other organic solvents, has high purity, is very stable, has narrow boiling range.

Solvent useful in extraction recrystallization work.

**Dry Cleaning**—Spotting agent for removing fats, oils, resins, waxes.

**Fats, Oils, and Waxes**—Solvent for fats, oils, waxes.

**Metalworking**—Degreasing agent for metal articles.

**Miscellaneous**—Degreasing agent for various purposes.

Process material in absorption spectrographic work (shows no absorption of ultra violet light above 2250 Angstrom units).

**Paint, Varnish, and Lacquer**—Solvent in lacquer thinners, paint removers, waterproofing compositions.

Solvent for resins, waxes.

**Perfume**—Extractant for essential oils.

**Petroleum**—Solvent for paraffin.

**Resins**—Solvent for some alkyd, cumar, and phenol-formaldehyde resins.

**Rubber**—Solvent for crude rubber.

**Textile**—Degreasing agent for fibers.

Solvent for fats, oils, resinous substances, waxes.

## Dibutyl-Lead Propionate

**Resins**—Stabilizer (U.S. 2307090) for vinyl resins against discoloration on heating.

## Dibutyl-Tin Diacetate

**Resins**—Stabilizer (U.S. 2307075) for vinyl resins against discoloration on heating.

## Diethyl Fumarate

**Electrical**—Base material (U.S. 2403215) in making compositions for insulating electrical conductors, by copolymerizing with vinyl chloride and adding a suitable plasticizer and an alkaline compound.

**Paint, Varnish, and Lacquer**—Starting point (U.S. 2403215) in making protective coating material ingredients, by copolymerizing with vinyl chloride and adding a suitable plasticizer and an alkaline compound.

## Dimethylaminoethylcellulose

**Bottling**—Starting point (Brit. 489668) in making sizes (solutions in acids) for regenerated cellulose used for capping and sealing purposes (improves the anchorage thereto of printing inks and lacquers).

**Cellulose Products**—Starting point (Brit. 489668) in forming filaments, bristles, self-supporting films, films which are clear, tough, and pliable.

**Chemical**—Starting point (Brit. 489668) in making addition salts with acids.

**Furniture**—Starting point (Brit. 489668) in making waterproof adhesives for veneering purposes.

**Miscellaneous**—Ingredient (Brit. 489668) of coating compositions useful for various purposes.

**Rubber**—Starting point (Brit. 489668) in making sizes (solutions in acids) for rayon tire cord (used to improve its adhesion to rubber).

## Methoxytriglycol Acetate

**(Methyl Ether of Triethyleneglycol Acetate)**

**Cellulose Products**—Solvent for cellulose esters.

**Chemical**—Advocated as good inert reaction medium (because of absence of reactive groups).

**Miscellaneous**—Advocated as antidusting agent for fine powders (because of low volatility and nonhygroscopity).

**Paint, Varnish, and Lacquer**—Solvent for cellulose esters, synthetic resins.

## Methylamyl Alcohol

**(Methylisobutyl Carbinol)**

*(Additional uses, supplementary to information in the book, "Uses and Applications of Chemicals and Related Materials")*

**Mining**—Frother (with other materials) in flotation recovery of certain copper ores.

**Paint, Varnish, and Lacquer**—Medium-boiling latent solvent in nitrocellulose lacquers (claimed to contribute good blush resistance, gloss, flow, and leveling in cold spray, brushing, and hot spray lacquers, to allow use of larger quantities of low-boiling alcohols in lacquer or lacquer thinner formulas, while retaining good blush resistance).

Medium-boiling solvent (in combination with methylisobutyl ketone) in nitrocellulose lacquers (claimed to give high toluene dilution ratio, excellent blush resistance, low viscosity especially valuable in high solids lacquer formulations).

**Resins**—Alcohol portion of solvents in synthetic alkyd and urea-formaldehyde baking finishes (claimed that small portions in conjunction with aromatic petroleum diluents yield solutions of low viscosity and low evaporation rate tends to eliminate bubbling during baking of finishes).

Resin solvent in phenolic type baking finishes (claimed that low water solubility lessens dehydration of gelatin rolls used in roller coating application).

## Orthoaminodicyclohexyl

**Chemical**—New, primary amine for organic syntheses (promises to be of particular value in reactions where an essentially water-insoluble, strong, primary amine is required).

Suggested for use as intermediate in chemical syntheses.

## Parachlorophenylchloromethylsulphone

**Pesticide**—New parasiticide claimed effective as lice-controller.

## Pentachloronitrobenzene

**Pesticide**—Claimed as new fungicide and soil disinfectant.

## Piperonyl Butoxide

**Pesticide**—Toxicity augmenter in household sprays (liquid insecticides and aerosols made with this new compound are claimed to be superior to straight pyrethrum insecticides in range of effectiveness, stability, and residual killing power, and to be completely free from toxic hazards, irritation, odor, and other undesirable characteristics).

Toxic agent described as a colorless, odorless liquid, completely miscible with mineral oils, readily soluble up to any desirable proportions in freon-12 and other gases used in aerosols.

## Sanguinarine

**Horticulture**—Said to be a substitute for colchicine as modifying agent for plant inheritance (treating seeds or seedlings with colchicine has caused a doubling of the chromosomes in some cases, thus creating new, and sometimes superior, strains; similar results have been reported with a weak solution of sanguinarine ap-

plied to snapdragons, the new treatment being said to cause even more plant modifications than a parallel application of colchicine, and to be somewhat less injurious to the treated plant material).

**Pesticide**—As a fungicide (extremely weak solutions reported to be effective in preventing the growth of the destructive root-rot fungus).

**Pharmaceutical**—In compounding and dispensing practice (reported used in treating coughs and skin diseases).

### Sodium Fluoracetate

**(1080)**

**Pesticide** — Exterminator for rats (claimed that rats like it because of its faintly acid flavor; otherwise it has no taste or smell and can be used in any kind of bait, or just in water, when other drinking sources for rats have been eliminated; it is very deadly, acting on the heart and central nervous system, to men and other animals and no antidote is known for it at present).

### Sodium Hydrosulphide

**(Sodium Sulphhydrate)**

*(Additional uses, supplementary to information in the book, "Uses and Applications of Chemicals and Related Materials")*

**Chemical**—Catalyst in making thioamides.

Reactant in making sodium thiosulphate, thiourea, thiosalicylic acid, thio- and dithiobenzoic acids, other organic chemicals.

**Dye** — Reactant in making synthetic dyestuffs.

**Leather**—Depilatory for hides.

**Mining**—In ore-floation processes.

**Rayon**—Desulphurizing agent for viscose rayon.

### Sodium Tetrasulphide

**Dye**—Reducing agent in making sulphur dyes.

Reducing agent for organic nitro bodies.

**Pesticide**—Ingredient of fungicides, insecticides.

Reactant in making fungicides, insecticides.

**Leather**—Depilatory in soaking solutions for hides and skins.

**Metallurgical**—Reagent in making metal sulphide finishes.

**Mining**—Reagent in ore flotation.

### Sorbic Acid

**(Acide Sorbique, Acido Sorbico, Hexadienic Acid, 2:4-Hexadienoic Acid, Pentadienecarboxylic Acid, Sorbinsaure)**

**Chemical**—Starting point in making amides, esters, and substituted amine compounds.

Starting point in additive reactions, with halogens, halogen acids, and hypohalites.

**Fats, Oils, and Waxes**—Process material in upgrading, or improvement, of natural drying oils (soybean oil can be improved to attain the properties of linseed oil, linseed oil can be upgraded to the equivalent of tung oil, and so on).

### Titanium-Ammonium Fluoride

**Paint, Varnish, and Lacquer**—Base (U.S. 2326156) in making extended rutile titanium pigments.

### Triethanolamine Hydrochloride

**Resins**—Starting point (U.S. 2317181) in making self-curing resins by condensing with urea and formaldehyde (such resins may be used for baking enamels, laminating, or molding).

### Zinc Stearate

**Cement**—Water-repellent in cement and concrete.

**Cosmetic**—Basis of dusting and drying powders.

**Miscellaneous** — Releasing agent for molding and casting operations (possibly of interest to the metallurgical, rubber, and plastics industries).

Water-repellent in finishing awnings, rope, tents, truck covers.

**Paper**—Water-repellent in paper.

**Pharmaceutical**—In compounding and dispensing practice (ingredient of skin-treating powders, ointments, and other preparations).

**Textile**—Water-repellent agent for canvas, duck, tarpaulin, other fabrics.


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# Imports at United States Ports

### *New York Imports*

ANILIN COLORS—2 dms, Parthia, Liverpool
58 dms, Ciba Co, American Attorney, Antwerp
25 dms, Carbic Color & Chemical Co, De Grasse, Le Havre
DYES—27 dms, Asiatic Trading Co, Exbrook, Beirut
ANISEED—326 bgs, Exbrook, Beirut
ANTIMONY ORE—380 cs, Metal Traders, Inc, Pioneer Wave, Hongkong
609 cs, National City Bank, Pioneer Wave, Hongkong
3,116 bgs, J Henry Schroeder Co, Santa Margarita, Antofagasta
ARABIC GUM—250 bgs, National Starch Products Co, Marwarri, Port Sudan
1,000 bgs, Richard D Heins Co, Marwarri, Port Sudan
200 bgs, Pan American Trust Co, Marwarri, Port Sudan
250 bgs, Dodwell, Ltd, Marwarri, Port Sudan
ASBESTOS FIBER—8,460 bgs, Union Asbestos & Rubber Co, African Crescent, Lourenco Marques
BARBASCO ROOT—2,578 bls, Randolph Valensi, Jutahy, Iquitos
722 bls, R J Prentiss Co, Jutahy, Iquitos
BAUXITE ORE—3,202 tons, Alcoa Mining Co, Alcoa Polaris, Paramaribo
250 bgs, Alcoa Mining Co, Alcoa Polaris, Paramaribo
BEES WAX—80 bgs, Samuel Zeitlins Sons, Signa, Paranagua
160 bgs, Samuel Zeitlins Sons, Westralia, Paranagua
38 bgs, E A Bromund Co, Notos, Port Au Prince
30 serroons, Robinson, Wagner Co, Agwicomet, Puerto Plata
BONES, JUNK—221 bgs, Industrial Packers Commercial Co, Signa, La Plata
BUCHU LEAVES—23 bls, Constantia, Cape Town
BUTTONLAC—200 bgs, Dings & Schuster Co, Marwarri, Calcutta
CAMPHOR OIL—72 dms, Dodge & Olcott Co, Pioneer Wave, Hongkong
CASEIN—500 bgs, The Borden Co, Lancero, Buenos Aires
400 bgs, J Henry Schroeder, Westralia, Buenos Aires
2,462 bgs, National Casein Sales, Westralia, Buenos Aires
CASSIA—370 bls, Arthur G Dunn Co, Pioneer Wave, Hongkong
225 bls, Wm M Allison Co, Pioneer Wave, Hongkong
200 bls, Chas T Wilson Co, Pioneer Wave, Hongkong
CASTOR BEANS—1,694 bgs, Baker Castor Oil Co, Westralia, Santos
989 bgs, Spencer Kellogg & Co, Notos, Jackmel
CINNAMON OIL—7 cs, Volkart Bros, Elizabeth Bakke, Colombo
LEAF OIL—1 dm, Dodge & Olcott Co, Irisbank, Galle
4 dms, Colgate-Palmolive-Peet Co, Irisbank, Galle
COD OIL—82 dms, Reilly, Whiteman, Walton Co, Fort Townshend, St Johns
COPAL GUM—245 bgs, O G Innes Corp, Mahenge, Matadi
287 bgs, H P Winteret Co, Mahenge, Matadi
51 bgs, O G Innes Corp, Pioneer Wave, Manila
202 bgs, S Winterbourne & Co, Pioneer Wave, Manila
500 bgs, Reichhold Chemical Co, American Attorney, Antwerp
CREAM OF TARTAR—280 bbls, T M Duche Co, Ribeira Grande, Lisbon
200 bgs, Aewling, Havana
CRESYLIC ACID—175 dms, Parthia, Liverpool
55 dms, H A Gogarty Co, Parthia, Liverpol
CUMIN SEED—126 bgs, Steel Seafarer, Khorramshahr
74 bgs, Louis Furth Co, Steel Seafarer, Khorramshahr
228 bgs, D Aboudi Co, Steel Seafarer, Khorramshahr
374 bgs, Wm M Allison Co, Steel Seafarer, Khorramshahr
91 bgs, D Aboudi Co, Steel Seafarer, Khorramshahr
CYANIDE PRECIPITATE—9 cs, American Metals Co, Santa Margarita, Puna
DAMMAR GUM—700 bgs, O G Innes Corp, Irisbank, Singapore
350 bgs, American Cyanamid Co, Rosalie Moller, Singapore
DIESEL OIL—35,716 bbls, Asiatic Petroleum Corp, Basilea, Aruba
ERGOT—23 bgs, Ell Lilly & Co, Ribeira Grande, Lisbon
ESSENTIAL OILS—10 dms, Dodge & Olcott Co, Pioneer Wave, Hongkong
FLEASEED—70 bgs, E Meer Corp, Elizabeth Bakke, Marseilles
FOUNDERS DUST—43 cs, Parthia, Liverpool
FUEL OIL—163,000 bbls, Esso Export Corp, Clarke's Wharf, Aruba
59,008 bbls, Asiatic Petroleum Corp, Basilea, Aruba
GLUE—100 cs, Coignet Chemical Co, De Grasse, Le Havre
GLUESTOCK—114 rolls, John Gorvers & Co, Cape Anne, Santa Marta
156 bls, Agwipincess, Tampico
70 bls, H Remis Co, Santa Monica, Barranquilla
252 bls, Karr Ellis Co, Parthia, Liverpool
GYPSUM, CRUDE—6,753 tons, National Gypsum Co, Sewells Point, Bretton
IPECAC ROOT—26 bgs, S B Penick Co, Cape Ann, Santa Marta
IRISH MOSS—80 bls, T M Duche & Sons, De Grasse, Le Havre
1,200 bls, Premier Peat Moss Corp, Mormacisle, Gdynia
KIRI LAC—200 bgs, Manross Corp, Marwarri, Calcutta
LINSEED OIL—54 dms, Booker Bros, Marwarri, Calcutta
MENTHOL CRYSTALS—50 cs, Consumers Import Co, Loide Panama, Santos
25 cs, Arthur G Gailler Co, Loide Panama, Santos
19 cs, Lo Curto & Funk Co, Saginaw Victory, Rotterdam
MICA—82 cs, Globe Shipping Co, Westralia, Buenos Aires
80 cs, Globe Shipping Co, Westralia, Buenos Aires
114 cs, Vilco, Inc, Westralia, Buenos Aires
275 cs, Eugene Munsell Co, Marwarri, Calcutta
21 blocks, John H Schroder Co, American Banker, London
MOLASSES—457,960 kilos, W R Grace Co, Santa Margarita, Slaverry
MONTAN WAX—102 bgs, Manufacturers Trust Co, Saginaw Victory, Rotterdam
200 bgs, Innis, Speiden & Co, American Attorney, Rotterdam
NAPHTHALENE—2,500 bgs, Irving Trust Co, Jessie Maersk, Saint Nazaire
PALM OIL—1,017 tons, Balfour, Guthrie, Ltd, Mahenge, Matadi
PAPAIN—162 cs, American Ferment Co, Irisbank, Colombo
PARACRESOL—9 kgs, H A Gogarty Co, Parthia, Liverpool
9 kgs, Parthia, Liverpol
PEPPER, BLACK—225 bgs, Brown Bros-Harriman Co, Saginaw Victory, Rotterdam
240 bgs, American Attorney, Antwerp
800 bgs, American Builder, London
PETITGRAIN ESSENCE—6 dms, P N Dreyer, Inc, Lancero, Buenos Aires
PETROLEUM, CRUDE—166,230 bbls, Gulf Oil Corp, Gulfvictor, Las Piedras
103,992 bbls, Gulf Oil Corp, Gulfscout, Las Piedras
124,493 bbls, Esso Standard Oil Co, Esso New Haven, Puerto La Cruz
PETROLEUM, CRUDE—118,642 bbls, Imperial Oil Co, Imperial Toronto, Puerto La Cruz
110,304 bbls, Esso Standard Oil Co, Esso Bridgeport, Ras Tanura
124,727 bbls, Socony Vacuum Oil Co, Samoset, Puerto La Cruz
POPPYSEED—150 bgs, Saginaw Victory, Rotterdam
QUICKSILVER—1,200 flasks, Barclay's Bank, Pioneer Wave, Yokohama
500 flasks, Import Export Industries, Pioneer Wave, Yokohama
ROSEWOOD OIL—6 dms, Fritzsche Bros, Mormacreed, Manaus
SCHEELITE ORE—545 bgs, Wah Chang Trading Co, Jutahy, Iquitos
SEEDLAC—250 bgs, Schwab Bros Corp, Marwarri, Calcutta
1,000 bgs, Ralli Bros, Marwarri, Calcutta
SHARKLIVER OIL—8 dms, Collett, Week, Hibecker, Inc, Westralia, Buenos Aires
SHELLAC—200 bgs, United Shellac Co, Marwarri, Calcutta
250 bgs, William Zinsser Co, Marwarri, Calcutta
280 bgs, Ralli Bros, Marwarri, Calcutta
SODA CAUSTIC—1,249 dms, Lightwork Products Co, De Grasse, Le Havre
1,750 dms, De Grasse, Le Havre
535 dms, Bank of Manhattan Co, De Grasse, Le Havre
TANKAGE, LIVER—500 bgs, International Packers Commercial Co, Signa, Boario
300 bgs, Wessel, Duval Co, Westralia, Montevideo
TAPIOCA FLOUR—300 bgs, Corn Products Refining Co, Agwicomet, Puerto Plata
TEA WASTE—670 bgs, Citro Chemical Co, Pioneer Wave, Shanghai
TRAGACANTH GUM—8 cs, David Abouti Co, Exbrook, Beirut
TRAGASOL GUM—106 bgs, Steel Seafarer, Khorramshahr
18 cs, M N Hakkak Co, Steel Seafarer, Khorramshahr
575 cs, Rohner Gehrig Co, Steel Seafarer, Khorramshahr
460 bgs, Credit Suisse Co, Jessie Maersk, Rouen
160 bgs, Meyerhaus Products, Jessie Maersk, Rouen
680 bgs, Stein, Hall Co, Jessie Maersk, Rouen
TUNG OIL—300 tons, Werner G Smith Co, Pioneer Wave, Shanghai
ULTRAMARINE BLUE—140 cks, J J Murphy Co, Sacramento, Hull
UREA—1,141 bgs, The United Sterling Corp, Saginaw Victory, Antwerp
VEGETABLE WAX—25 cs, Frank B Ross Co, Pioneer Wave, Kobe
25 cs, Paul A Dunkel Co, Pioneer Wave, Kobe
WATTLE BARK—3,247 bls, Hammond & Carpenter Co, Constantia, Durban
WHITING—1,200 bgs, United Baltic Corp, Sacramento, Hull
WITHERITE—200 tons, E I du Pont de Nemours & Co, Sacramento, Newcastle-on-Tyne
WOLFRAM ORE—400 bgs, Phillip Bros, Pioneer Wave, Hongkong
WOOL WAX—22 dms, Innis, Speiden Co, Sacramento, Hull
ZINC CONCENTRATES—8,003 tons, American Smelting & Refining Co, Joaquin Miller, Barwood

### *Baltimore*

CHROME ORE—3,630 tons, General Refractories Co, Pioneer Wave, Masinloc
3,600 tons, General Refractories Corp, Rosalie Moller, Masinloc
MANGANESE ORE—4,000 tons, Carnegie Illinois Steel Corp, African Crescent, Durban
PEPPER, BLACK—278 bgs, J Henry Schroeder Co, Saginaw Victory, Rotterdam
136 bgs, First National Bank of Boston, Saginaw Victory, Rotterdam

### *Boston*

QUEBRACHO EXTRACT—7,600 bgs, International Products Corp, Westralia, Buenos Aires
TAPIOCA FLOUR—4,980 bgs, Gelsmar Co, Westralia, Santos
WATTLE EXTRACT—870 bgs, National Shawmut Bank of Boston, African Crescent, Durban

### *Norfolk*

COCOA RESIDUE—162 bls, Saginaw Victory, Rotterdam
KYANITE ORE—30 tons, Chas Taylor Co, Marwarri, Port Sudan
MANGANESE ORE—1,000 tons, Rich Murry Co, Marwarri, Port Sudan

### *Philadelphia*

ASBESTOS FIBER—687 bgs, Chas Kurz Co, African Crescent, Durban

### *San Francisco*

CASSIA—50 bls, Internatio Rotterdam, President Wilson, Hongkong
168 bls, Internatio Rotterdam, President McKinley, Hongkong
100 bls, H M Newhall Co, Pacific Bear, Hongkong
50 bls, Chas T Wilson, Pacific Bear, Hongkong
COTTONSEED OIL—291 tons, Pacific Vegetable Oil Co, President McKinley, Shanghai
GINGER—22 bgs, McClintock, Stern Co, Swarthmore Victory, Kingston
PAPRIKA—100 bgs, W L McClintock Co, Santa Juana, Valparaiso
PEPPER, BLACK—230 bgs, Internatio Rotterdam, Duivendyk, Rotterdam
117 bgs, Keerdyk Trading Co, Duivendyk, Rotterdam
PIMENTO—150 bgs, Swarthmore Victory, Kingston
SESAME SEED—50 bgs, H M Newhall Co, President Wilson, Hongkong
12,805 bgs, Bank of California, Fleetwood, Corinto
SODIUM NITRATE—3,660,123 lbs, Guaranty Trust Co, Santa Juana, Tocopilla
TAPIOCA—250 bgs, H M Newhall Co, Pacific Bear, Hongkong
TEASEED OIL—70 dms, Pacific Vegetable Oil Co, President McKinley, Hongkong
150 dms, Leghorn Trading Co, President McKinley, Hongkong
190 dms, Pacific Vegetable Oil Co, President McKinley, Shanghai
564 dms, Nylos Trading Co, Fleetwood, Hongkong
TUNG OIL—280 tons, Vongehr Low China Co, Pacific Bear, Shanghai

## *National Fertilizer Ass'n*

*—Continued from page 42*

ened) and careless of the responsibilities on which freedom must stand.

**Plant Food Research**

The work of the association's plant food research committee was reviewed by some fourteen of its members under the chairmanship of H. B. Siems, of Swift & Co., in a session, Monday forenoon.

*ASA dinner* plans for the meeting of the American Society of Agronomists in Fort Collins, Col., in August, were outlined by R. H. Engle. The dinner is a custom of the committee. This year it will be a chuckwagon affair in conjunction with the local ASA group.

*Plant nutrient symposium* planned by the committee is still in the talk stage, according to D. D. Long. Data are being gathered, and the idea was slated for discussion in Chicago later in the week with representatives of botanical, agronomic, plant physiologic, chemical, and other interested organizations.

*Summer tour* has expanded and been opened, it was reported by H. H. Tucker. The start will be made August 16 and over six days visits will be made to experiment stations and other points of interest in Illinois, Iowa, and Nebraska. Many agronomists are expected to participate and the tourists will go on to the meeting of the American Society of Agronomists in Colorado the next week.

*ASA plant nutrient unit*, urged by the committee as a new division in the agronomists' organization, is in the hands of the ASA executive committee, said H. B. Siems. He asked for suggestions on the matter for recommendation to that body.

*Peanut cultivation* is to be covered in a monograph being prepared by the committee. D. D. Long said that the work was about two-thirds completed, and that a book of 175 pages would be the outcome. Who will publish it has not yet been decided. The data got on the peculiarities of the peanut plant were said to be very illuminating. The monograph will be given a preview before the Southern Agricultural Workers Association in Baton Rouge, La., next February.

*Weed-control* had been suggested as the activity of a new subcommittee. H. H. Tucker said that it was desirable to have knowledge of chemical herbicides, and others agreed; R. H. Engle pointing out that the use of such agents directly affected the application of fertilizer. It was opined that insecticides, and perhaps fungicides, should be included in the subcommittee's scope; but that, it was felt, would make too big a job for one group. The mixing of herbicides and insecticides with fertilizer presents a number of problems, it was said. Wireworms and clover weevils are being combated by such methods. The need for crop protection against the blowng about of herbicides was pointed out. The subcommittee on weed-control will be named shortly, Chairman Siems said.

*Pasture fertilization*, said J. A. Naftel, accounts for from 12 percent to 15 percent of the consumption of fertilizers. Livestock represents 58 percent of farm income. Hay and other forage crops constitute 60 percent of the feed of livestock. So, pasture fertilization presents big opportunities. What can be done in that field was shown in colored slides by Mr. Naftel.

*Water relations* to fertilizer were discussed in a report by a subcommittee headed by H. B. Mann. This covered the increasing use of fertilizer in liquid form, some of it in connection with irrigation, and irrigation efficiency and economic use of fertilizer were said to go hand in hand. The forthcoming 1948 report of progress in soil management and irrigation in the Columbia river basin was cited as very informative.

*Radio-active investigations* were being aimed at the correlation of agronomic and chemical problems, said H. B. Siems, evidence so far indicating that radio-active materials had no additional influence on plant growth, but do serve as tracers of the use of nutrients by plants. They may be found to have some effect on genes. There was a wide difference in reports on any particular usefulness of alpha particles.

*Small grains* were being studied in all factors of crop production, said Leroy Donald. The influences of seed treatment, planting time, date and rate of top dressing, kinds of top dressings and other fertilizers were being covered. Attention was being given also to the influences of methods of pest control. An outline of the demonstrations of the North Carolina station was presented in graph form and that program was highly commended. A symposium on small grains fertility will be held in connection with the ASA meeting in August.

*Legume fertilization* was reported to present particular problems, especially with respect to the influence of root nodulation. The subcommittee report, briefed by D. D. Long, showed that nodulation affected the intake and yield of nutrient by soybeans, and that the results of fertilization treatments of legumes should differ from those of nonlegumes. Studies of fertilizers for large-seeded legumes, it was advised, should include investigations of the influence of applied fertilizers on root-infecting bacteria and other biological factors of the soil. Study was also urged of the economic comparisons of growing large plants (largely carbohydrate) and smaller plants of more concentrated nutrient value.

*Orchard fruits* are getting more and more interest from horticulturists and soil scientists with respect to fertilization, said S. D. Gray. His subcommittee's report traced that trend from the days of manured orchards to modern methods based on leaf analysis and tissue tests as indicators of plant conditions. A plan for improving the nutrient balance of fruits was outlined.

*Tobacco fertilization* and general plant improvement got a deal of attention; some of it "off the record". The sub-committee report handed in by H. E. Hendricks comprised records from a number of State experiment stations covering quantity of fertilizer, proportion of nitrogen, placement of potash, use of peanut-depleted soils, the influence of common mineral-element nutrients, and other aspects of tobacco-growing. Some attention was given to the use of copper sulphate in tobacco fertilization. Study has been started on the influence of various kinds of nutrient-carriers and various proportions of major nutrients on "fire-holding capacity."

*Nutritive values* of crops are not simply affected by fertilizers, said H. E. Hendricks for another subcommittee; the problem of such influences presents a full-time job of keeping up with the progress of knowledge in nutrition. A balanced fertilizer basis is essential to consistent findings. Study of the relations to nutritive value are being made in collaboration with representatives of both human and veterinary medicine. Some interesting data have been got on the effect of calcium-phosphorus ratios on breeding-power and speed of horses.

*Methods and time* of fertilizing were covered in a report by R. H. Engle. In the study of how much, where, and when, the subcommittee is now putting emphasis on where as a matter of dollar return for the farmer. Timing has been found to increase yields, control mildew, hasten tomato blossoming, and increase yields of potatoes, alfalfa, peanuts, and beans. More experimentation was advised.

*Corn research* in fertilization in ten States was reported for a subcommittee by H. H. Tucker. The report also told about corn contests and said that, although corn can be damaged by 2,4-D, light dosage successfully eradicates weeds from cornfields. Corn yields bear a direct relation in quality and quantity to the rate of fertilizer application, it was said, on the basis of 843 reports from farm tests. Increased yields are becoming common. The subcommittee reported circulation of more than 200,000 copies of the bulletin, Corn Speaks, published by the Coke Oven Ammonia Research Bureau.

*Hunger Signs in Crops*, the research committee's publication, has run through three printings of a total of 27,500 copies, reported R. H. Engle. A second, revised edition has been got under way, and he asked for good color photographs of symptoms of nutrition deficiencies in plants, to be included in the new book. The point was made that better results would be got with the ordinary agricultural reader if the illustrations pictured such symptoms as they are usually met, rather than as worst developed.

## National Petroleum Ass'n Announces Meeting Dates

The National Petroleum Association has fixed dates for its remaining meeting this year, for its two meetings next year, and for two meetings in 1950. The dates and locations are as follows:—September 15 to 17, 1948, Traymore hotel, Atlantic City, N. J.; April 13 to 15, 1949, Cleveland hotel, Cleveland, Ohio; September 14 to 16, 1949, Traymore hotel; April 12 to 14, 1950, Cleveland hotel, and September 13 to 15, 1950, Traymore hotel.

## *Trade Briefs*

**Anglo-Iranian Oil** Company has been granted export licenses for 11,650 tons of heavy oil-line pipe by the Office of International Trade.

**Atlantic Refining** Company, Philadelphia, has ordered twenty-one radar sets from the Raytheon Manufacturing Company for installation in its oil tankers.

**Warren Petroleum** Corporation has named Bernard R. Carney manager of its gas division, with headquarters in Tulsa, Okla.

**Esso Standard Oil** Company has appointed Henry J. Drucquer assistant manager of its advertising-sales promotion group.

**Sun Oil Company**, Philadelphia, has published a new bulletin covering the design and application of industrial heat-transfer systems using petroleum base oils.

## Heads Fertilizer Sales

Claude J. Byrd has been appointed fertilizer sales superviser by the Spencer Chemical Company, Kansas City, Mo. Mr. Byrd, who was formerly sales representative for the company in Kansas, Oklahoma and Arkansas, succeeds W. Ralph Smith, who resigned on June 15.

## Toni Co. Moves Offices

The Toni Company, cosmetics manufacturer, Chicago, has moved its offices into new quarters in the Merchandise Mart in that city. The move was to provide additional space for administrative personnel and to accommodate office personnel recently moved from St. Paul, Minn.

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## N.J. Pharmacy Board Elects New Officers

The Board of Pharmacy of the State of New Jersey elected Harry B. Reibel, of Elizabeth, president at a recent meeting in Trenton. Other officers named are: vice-president, Emil P. Martini, Hackensack; treasurer, Guy R. Luongo, Audubon, and secretary, Wilbur E. Powers, Trenton.

Stephen M. Duschock, of South River, was named a member of the board, to succeed Adolph V. Palumbo. Mr. Palumbo had completed ten years as a member of the board and was ineligible, under its regulations, to continue. During his time on the board he had served in all four of its offices.

## American Retail Foundation Plans Conference Sept. 8-9

The American Retail Foundation will hold a field conference of its national and state retail association members at the French Lick Springs hotel, French Lick, Ind., on September 8 and 9. The first day of the conference will be devoted to separate meetings of the central council of national retail associations and the national conference of state retail associations. Sessions on the second day will be devoted to discussions, with the two constituent bodies meeting jointly.

### Pharmaceutical Products Corp. Buys Clark-Babbitt Interests

The Pharmaceutical Products Corporation, West Hanover, Mass., has purchased the complete drug division of Clark-Babbitt Industries, Inc., Boston. The sale included the Clark-Babbitt Pharmaceutical Laboratories, Inc., and Dr. J. F. True & Co. President of the Pharmaceutical Products Corporation is Dr. J. Schneider.

### Sindar Corp. Issues Brochure

The Sindar Corporation, industrial aromatics and chemicals, New York, has published a four-page folder entitled "Compound G-4 for Household Disinfectants." The publication describes the germicidal activity of the company's bis-(5-chloro-2-hydroxy-phenyl)methane, and gives suggestions for its use and application. Copies may be obtained from the corporation at 330 West Forty-second street, New York 18, N. Y.

### Syran Heads ECA Transportation

The Economic Cooperation Administration has named Arthur G. Syran director of its transportation division. Mr. Syran recently returned from Japan, where he served as chief of the water transportation division in the general headquarters of the Supreme Commander of Allied Powers.

### Argentina Shifts Economic Policy

The government of Argentina has lifted its restrictions on sending abroad money representing profits made by foreign companies operating in Argentina. At the same time, Argentina lifted nearly all restrictions on importation of goods from Britain, France, Italy, Holland, Belgium and Spain.

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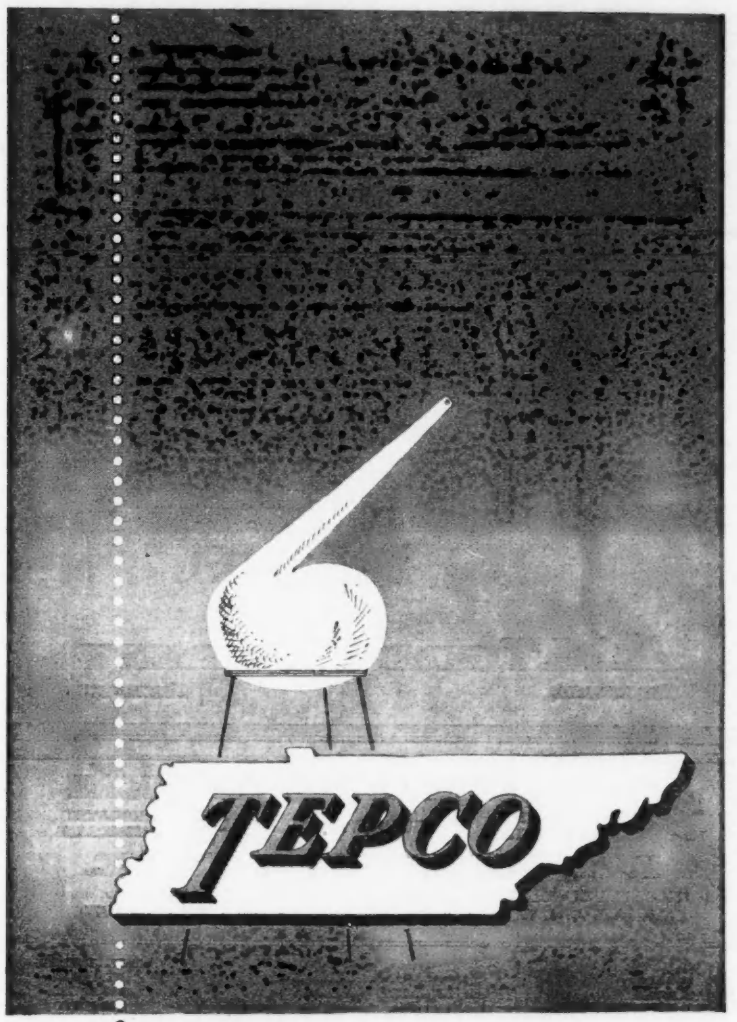

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# Essential Oils, Other Aromatics

Price-skimming continued a feature in the market for essential oils and aromatic chemicals last week, the ladle being applied so effectively to Ceylon citronella, sandalwood, and spearmint oils prices that the market price index was depressed 2 points to establish 124.9 as another new low for the current movement. Grapefruit oil was also down. On the up side of price developments were dillseed and distilled lime oils.

Behind the continued fall in prices was to be found the general lack of consumer operations. In almost all categories of the oils market, consumer inventories at relatively high levels consisted of merchandise bought at prices far higher than the same goods may be replaced at today. Plentiful stocks of high cost merchandise in consumers' warehouses operated to the reduction of demand to a level not above jobbing size in most instances.

To high inventories of raw materials must be added similar inventories of manufactured products. Resistance at the point of retail distribution of such products as soaps and perfumes has caused unsold goods to backup in producers' warehouses. Until the the key-log of light demand has been dislodged from the dam behind which stocks of all sorts have piled up, there can be little hope for a resumption of raw material and finished goods selling along normal lines.

The situation with respect to the spot market was having its effect on primary market replacement costs. Foreign countries supplying this country need dollars above all else and unless they can sell their home manufacturers to the United States, accumulation of dollar credits is all but impossible. Another hindrance to selling at the origins is the fact that many exchange values are of the blackmarket variety—a fact not making for the free flow of normal commercial intercourse between this country and the foreign markets.

## Market Trends

**Prices Advanced**

Dillseed oil, $1 per lb.
Lime oil, distilled, 25c. per lb.

**Prices Reduced**

Citronella oil, Ceylon, 10c. per lb.
Grapefruit oil, 10c. per lb.
Mace oil, 30c. per lb.
Sandalwood oil, 50c. per lb.
Spearmint oil, 15c. per lb.

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 124.9 | 126.9 | 127.8 | 189.8 |

*(For Current Prices see Page 9)*

## Essential Oils

**Angelica**—Some quarters reported exhaustion of stocks of the oil manufactured from angelica root. Others reported moderate supplies to be holding on the basis of very steady spot quotations.

**Anise**—Demand covered the immediate requirements of a rather small number of buyers but, despite the absence of more activity in the market, dealers succeeded in maintaining quotations in fairly steady position and in line with what now has to be paid for replacement.

**Bay**—Some gain in sales involving jobbing quantities of this commodity was reported occasionally during the past week but in the main the principal manufacturing consumers had few needs to cover and the market as a whole was reported to be generally quiet, though also reasonably steady so far as prices were concerned.

**Bergamot**—Large consumers were still mainly aloof from the market supplying this article to manufacturers, this for the reason that stocks of raw material in consumers' warehouses were more than sufficient to cover their present and considerably reduced consumption of the merchandise. Pricewise, the market was in a position favorable for those coming to the spot with firm orders in hand.

**Bois de Rose**—In the sense that there was not much spot demand for the article, the market might be judged reasonably favorable for consumer operations because of the current low total of sales. However, the fact that reasonable firmness governed the cost of replacements in the primary market was counted a factor in the maintenance of quotations that featured the market last week.

**Camphor**—The market was routine and, in some ways, a strictly nominal affair. Stocks of natural oil were far from being large and, hence, the absence of substantial manufacturing requirements failed of adverse effect on the price views of sellers.

**Cassia** — Trade continued relatively small, and until consumer stocks have been reduced substantially, revival of major sales would seem to be unlikely. Present stocks held by consumers will cover requirements for some time to come based on the present scale of product production, especially in the direction of soap manufacturers.

**Cedarleaf**—Spot and replacement prices appear to be in equilibrium and, hence, the absence of more than hand-to-mouth transactions last week failed of adverse effect on prevailing quotations. Stocks could withstand a considerable expansion in buying.

**Cedarwood**—Apparently the downward trend of quotations has run its course for the time being at least. Sellers recently scaling prices downward ended their movement in that direction and intimated that spot and replacement costs had been brought into alignment.

**Cinnamon**—The market was quiet but reasonably steady. Cables from primary market points have changed prices but little of late and the steadiness of local quotations has been a reflection of that aspect of the market. Demand has covered immediate requirements only for the past several weeks and trade was of that ilk last week.

**Citronella**—Ceylon oil has come down substantially, local quotations being minimum at 70c. per pound while the range continued to reach $1.05 according to seller. Much would depend upon the source and quality of oil offered when it came to establishing actual selling prices.

**Clove**—Sufficient selling has been developed to give a steady undertone to

## Essential Oils Imports for First Quarter

A report on total imports of essential oils into the United States during the first quarter of this year, as well as for the last month of the quarter, has been released by the Department of Commerce. Import figures, in pounds, for the various oils were as follows:—

| | Pounds | |
|---|---|---|
| | March, 1948 | First quarter, 1948 |
| Almond, bitter | 275 | 495 |
| Anise | .... | 9,240 |
| Bergamot | 8,314 | 49,464 |
| Bois de rose or lignaloe | 4,037 | 73,332 |
| Cajeput | 220 | 220 |
| Camphor oil (natural) | 10,155 | 64,328 |
| Camphor oil (spec. gravity 1.07) | .... | 67,500 |
| Cananga or ylang-ylang | 901 | 10,029 |
| Caraway | .... | 220 |
| Cassia | 35,280 | 49,980 |
| Cedarleaf | 1,380 | 1,805 |
| Cinnamon leaf | .... | 12,989 |
| Citronella | 103,092 | 371,356 |
| Clove | 6,102 | 54,165 |
| Cornmint | .... | 397 |
| Eucalyptus | 83,760 | 220,115 |
| Fennel | 1,102 | 1,102 |
| Geranium | 5,183 | 7,791 |
| Guaiac wood | .... | 5,634 |
| Ho oil | 256 | 616 |
| Juniper | .... | 2,260 |
| Lavender | 40,096 | 94,678 |
| Lavender, spike | 28,422 | 47,485 |
| Lemon | 26,181 | 76,591 |
| Lemon, terpeneless | 1 | 1 |
| Lemongrass | 46,939 | 84,373 |
| Lime | 5,051 | 21,109 |
| Orange | 13,045 | 47,061 |
| Orange flower or neroli | 7 | 46 |
| Origanum | 336 | 336 |
| Orris | .... | 26 |
| Palmarosa | .... | 500 |
| Patchouli | 1,723 | 5,487 |
| Peppermint | .... | 33 |
| Petitgrain | 77,606 | 132,052 |
| Pine needle | .... | 1,650 |
| Rose or otto of rose* | 102 | 383 |
| Rosemary | 5,182 | 11,166 |
| Sandalwood | 1,175 | 4,460 |
| Thyme | 8,723 | 10,049 |
| Vetiver | 891 | 11,409 |
| All other oils | 49,457 | 344,220 |
| Total | 565,643 | 1,896,112 |

* Converted from ounces to pounds.

*For Late Market Developments, See Page 4*

prevailing prices regardless of the fact that raw material costs have been weak over an extended period of time, a fact that some manufacturing consumers of spice have put to their advantage.

**Dill**—Limited stocks of seed oil are moving into consumption at a rate contributing much to the tightening of the market and the elevation of selling prices in quarters still able to accept orders. At the close of last week the market was up to $9 to $9.50 per pound and the position appeared to be relatively strong. Quarters normally supplying the article in large quantities reported total lack of prompt delivery supplies at this time.

**Eucalyptus**—Sales into consumption for prompt delivery were seasonally slow and the absence of a more substantial requirement arising in consuming quarters tended to make for considerably easier market undertones without actually producing further reduction in spot quotations. Shading of the current market would not surprise.

**Geranium**—The fact that most consumers have stocks warehoused in excess of their present consuming requirements made for a very dull spot market in which prices, though unchanged, were none too firm in most directions. However, suppliers of large quantities in times of normal consumption appeared disposed to await the resurgence of needs, maintaining quotations unchanged in the meanwhile.

**Grapefruit**—Appearance of more liberal stocks in some directions led to quotations being reduced to the level of $1.15 to $1.25 per pound. However, the range was still to $2.60 per pound—though dealers and brokers both said that they knew no direction in which oil could be actually sold at that extreme price level.

**Juniper** — Disappearance of demand traced in no small measure to the absence of gin manufacture in this country. Production of gin normally accounts for the major consumption of this article and for some time past the distillers have done practically nothing. Hence the oil market remained dull last week, though prices were not reduced below the level recently set at $5 to $5.25 per pound for single distilled and $7 to $7.25 for the double distilled product.

**Lavender**—The majority of dealers retained reasonably steady prices but lack of demand has served to undermine the market in some degree and the tendency toward price shading has appeared more frequently in the picture of late. Most manufacturing consumers hold more oil than they can see a need for at the present time.

**Lemon**—The movement into consumption showed no material improvement and it appeared likely that most consumers have fair stocks still in warehouse against more than their current requirements. Pricewise, the market was reasonably steady and while some shading might develop under competitive circumstances, in the main sellers maintained the market in practically all instances.

**Lemongrass** — Resistance to further price declines developed in local circles during the past week and the period under review proved to be one of considerable stability in the matter of values. However, it may be said that the price views of most buyers continued to be substantially lower than those received by cable from the origins last week.

**Lime**—Prices on distilled Mexican oil came to life last week when replacement costs showed a rise and sellers at the recent minimum of spot quotations raised the market accordingly. At the end of the period under review, the market on that variety of oil ranged $4 to $5 per pound. No developments in expressed oil were noted.

**Mace**—The market was down to $4.80 per pound and while it ranged to $8.75, according to quoter, it appeared to be virtually certain that only good luck could produce sales at the outside figure. In fact, and in view of the present $4.75 per pound price on nutmeg oil, there was reason to suspect that purchases of mace at $4.75 were not an improbability.

**Mustard**—Synthetic oil was very steady at $1.40 to $1.45 per pound, the market generally quoted to consumers and ranging according to the quantity of oil wanted by buyers.

**Orange**—Not more than fair selling was reported last week and for the most part the quantities taken indicated that buyers were operating quite close to their actual consuming needs. Anticipation of the more distant requirements rarely appeared in transactions last week. Prices proved to be well maintained on all varieties.

**Palmarosa**—Most consumers were aloof from spot buying, their reserve stocks now in warehouse covering their apparent needs over a considerably distant future. Not much buying in the replacement market was reported, a fact tending to weaken the forward position of the merchandise within moderate limits.

**Patchouli**—Ayone wanting this article can buy it from first hands at prices far below those considered to be the market as applied to sales to manufacturing consumers. Practically no interest of any sort was current in local circles last week.

**Peppermint**—To the reduction in acreage under cultivation this year may be added a reduction in the production per acre, the combined influences being calculated strengthening elements as regards prices at which new crop goods will be sold this year. In view of the present situation with regard to the coming crop, buyers were naturally aloof from actual placing of contracts and it is likely that the next crop report having to do with the progress of the growing mint will be awaited with more than usual interest by the purchasing trades.

**Pineneedle**—A fairish trade was reported last week, being enough in volume to work in the direction of well stabilized prices. Quotations were also little subject to competitive influences in view of the inability of most importers to replace to greater financial in primary markets at the present time.

**Sandalwood**—The market continued to sprout competition and competition spawned lower prices during the past week. Offerings of N. F. quality oil were made as low as $13 per pound. With oil available thereat, it was difficult to comprehend a price range that, in fact, went to as high as $22.50.

**Spearmint**—The market was lower at $7 to $10 per pound, quoted over that range according to seller. And it was said, locally, that present conditions indicate a probable decline in spot and primary market prices as the crop comes nearer to actual production.

**Wormseed**—The market was definitely $3.75 per pound minimum and dealers indicated that anything lower than that level would be a quotation prevailing in the primary market and, hence, being a firsthand price that dealers would have to pay at the origin. The range was to $5.50 per pound on the spot.

**Wormwood**—Local dealers called the spot market $8.50 to $13.50 per pound according to seller. Primary market pro-

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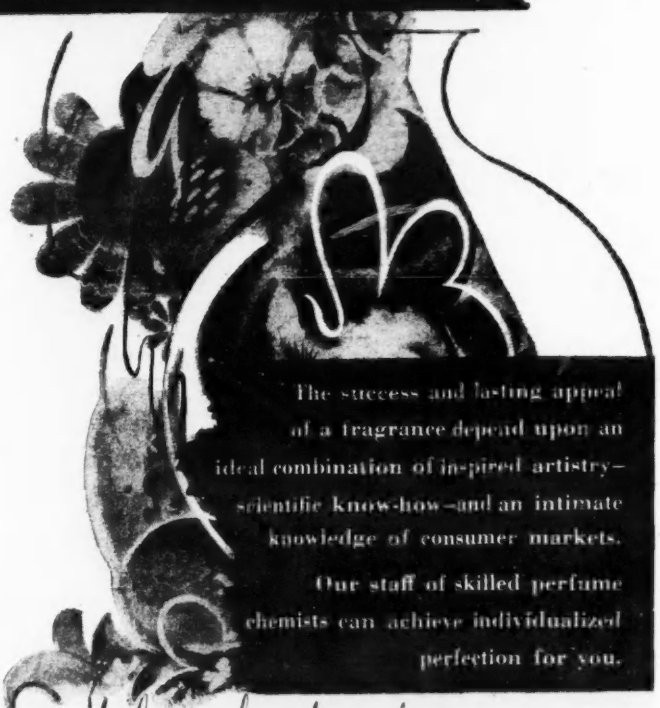
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duction was being offered directly to manufacturing consumers, though the prices at which such business might be transacted were undisclosed last week.

## Aromatic Chemicals

**Ambergris**—Consuming industries had little need for this article since their stocks of manufactured products prove more than sufficient to cope with present sales into retail channels. Ambergris was a dull article that showed no change in price nor was any expected.

**Anethol**—Stability prevailed in this article, exactly as it did in prices for the raw material from which the product is derived. Demand was occasional, irresolute, and indeterminative most of the time, consisting mainly of calls for jobbing quantities.

**Citronellal**—The market was quiet. Manufacturing consumers had good sized inventories of the item and hence were usually aloof from the market. Where demand did appear, it was usually for jobbing lots.

**Ethyl Vanillin**—Demand was routine, a fact not adverse to the excellent maintainence of producers' quotations on this item. The supply more than equaled the requirements of manufacturing consumers.

**Eucalyptol**—Seasonal dullness was in full flush and the absence of more than jobbing demand was the general report. Pricewise, the market held very steady.

**Ionones**—Most suppliers of this material in its several forms reported sales outlets to be virtually plugged by the absence of consumer requirements. Most buyers' inventories of both the raw materials and manufactured products derived in part therefrom were substantial in size and, on the basis of current sales of the manufactured goods, more than sufficient to meet all current needs.

**Vanillin**—Stability in price was the rule among all suppliers. Producers have maintained current quotations for a very long period of time and they fail even to suggest the possibility of an early change in that aspect of the market in general. Demand was mainly for prompt requirements of a not large number of buyers.

# Colloid Symposium Discusses New Techniques

Studies of soapy water which may have broad implications for dyeing, cosmetics manufacture and many other industrial processes were reported today by Prof. Peter Debye of Cornell University, winner of the 1936 Nobel Prize in chemistry, at the opening session of the American Chemical Society's recent colloid symposium at the Massachusetts Institute of Technology.

The formation of micelles, particles so small that they remain suspended indefinitely in liquid, has been observed by passing beams of light through water containing varying concentrations of soap, according to Dr. Debye, who explained that each micelle is a tiny cluster of molecules bound together by electrical charges. Although a liquid containing micelles may appear perfectly clear, when a beam of light is passed through it the path of the light is sharply outlined like the light from an automobile headlight on a foggy night.

The concentration of soap at which micelles form can be calculated accurately by taking into account several factors, including the type of soap, the electrical properties of the solvent, and the amount of salts dissolved along with the soap, Dr. Debye told members of the society's colloid division, which sponsored the symposium sessions in the Eastman lecture hall of M. I. T.

Gelatin, face cream, and many other common products consist of liquid interspersed with micelles, he added, and soap micelles are employed to carry insoluble pigments, thus making it possible to apply to cloth a wider variety of brilliant dyes.

As soap is added to water the concentration increases to a point where micelles begin forming spontaneously, Dr. Debye continued. Theoretically, he said, that critical point would be sharp if there were an infinite number of molecules in each micelle; that is, as the critical point is reached another drop of soap would cause all the soap molecules to coagulate into clusters. Practically, however, the transition will be very sharp if the micelles consist of many individual molecules, he stated.

Adding a salt to the solvent reduces the amount of soap required to form micelles, Dr. Debye said, explaining that the salt molecules separate into electrically charged fragments called ions, which "shield" the charges on the micelles.

### Wood Preserving Process Told

Wood products which must be exposed to moisture can be protected from undue swelling by a plastic process which was described by two government chemists. Wood in its natural state contains a relatively large amount of empty space, chiefly in the form of fiber cavities and pores. Dr. Alfred J. Stamm and Dr. Harold Tarkow of the Department of Agriculture's Forest Products Laboratory, Madison, Wis., explained. Introduction of synthetic resins, or plastics, of the phenol-formaldehyde or urea-formaldehyde types within the cell-wall structure provides bulk for the fiber walls and minimizes both swelling and shrinking, the paper said.

Treating wood with acetic anhydride also bulks the fiber and reduces shrinking and swelling by altering the basic molecular structure, it was reported. Still another method involves the use of wax that is insoluble in water, according to the paper, which said the wax is deposited within the cell walls by a double replacement process. First, water is replaced with a solvent which mixes readily with both water and wax, and the resultant liquid is replaced by wax. This method is not recommended, however, because of the complexity of the substitutions, the paper stated.

### Plant Research Aids Described

Neglected and little understood biological forces may be significant factors in the life process of plants, Dr. Wanda K. Farr of the research division of the Celanese Corporation of America, Summit, N. J., reported. Pointing out that both European and American scientific publications have recently mentioned the failure of modern botanists to consider microscopically visible activity of the living protoplasm, or essential life-giving substance, of plant cells, Dr. Farr declared:—

"In the early, transient stages, as well as in the permanent patterns of the mature cell wall, excellent material is available for the study of forces operating between biological units of microscopic size—forces which are little understood but which play an important role in the maintenance of living plants."

## Magnus Tendered Luncheon

Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc., essential oils house, New York, was recently tendered a luncheon in honor of his thirtieth anniversary as a trustee of the East River Savings Bank, New York.

Mr. Magnus had the distinction of being the youngest bank trustee in the state of New York at the time of his appointment by the East River Savings Bank in 1918. He is also a director and former president of the New York Board of Trade, a member of the executive committee and board of directors of the Underwriters Trust Company and the New York Casualty Company, a director of the Surety Fire Insurance Company, and vice-chairman of the board of directors of the Beekman Downtown Hospital.

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## Vitamin Foundation Makes Four New Grants

New grants-in-aid, totalling $16,000, will be awarded July 1 to scientists at four universities for vitamin research, Dr. Robert S. Goodhart, scientific director, the National Vitamin Foundation, New York, announced last week.

The new investigations involve eye health, the nutritional status of school children, the relationship between pyridoxine (Vitamin $B_6$) and fat metabolism, and the effects of time elements on the utilization of water soluble vitamins, according to Dr. Goodhart. The new grants bring to $126,320 the amount appropriated by the foundation for nutrition research since March, 1946.

Universities receiving the grants are Western Reserve University, School of Medicine, Cleveland, Ohio; University of Vermont, College of Medicine, Burlington, Vt.; Massachusetts Institute of Technology, Cambridge, Mass., and the University of Southern California Medical School, Los Angeles, Calif.

### Foreign Trade Zones Planned in Texas, West Coast

Plans to apply for the establishment of two new foreign trade zones on the west coast, and one in Texas, are revealed in the annual report to congress of the Foreign-Trade Zones Board, Department of Commerce.

On the west coast, the Los Angeles Harbor Board and officials of the Port of Seattle are expected soon to submit applications for foreign-trade zones. An application from San Francisco was approved by the Foreign Trade Zones Board on March 10, 1948. This zone was opened on June 10.

In Texas, the establishment of a foreign-trade zone by a private warehousing firm in San Antonio was recently authorized by the Texas legislature. This legislative authorization is required by the Celler Act as a step preliminary to the filing of an application by a private corporation, for a charter to establisl. a foreign-trade zone.

The 1946 report of the New York Foreign-Trade Zone, which accompanied the board's report, showed a substantial increase over war years, in both tonnage and value of merchandise handled. This increase was due largely to additional storage space resulting from the transfer of zone activities back to Staten Island from North River piers.

### Mich. Chemical Moves Part Of Export Sales Dept. to N.Y.

Michigan Chemical Corporation, St. Louis, Mich., has transferred a portion of its export sales department from the home office to 230 Park avenue, New York. Earl L. Reichard, export sales manager, is in charge of the world-wide distribution program of the company's pharmaceutical, industrial and insecticidal chemicals.

## Vitamin D-3 Process Developed in Holland

Two young Netherlands chemists have developed a method for producing synthetic vitamin D-3 at a cost considerably below the present price of codliver oil, according to Aneta News Agency. The two chemists, J. van Vliet and W. Stevens, developed their process in the Philips and Van Houten laboratories in Eindhoven, Holland. Production of the vitamin on a large scale is reportedly contemplated, and will supply the country's domestic requirements and leave a surplus for export.

## Philadelphia Quartz Plans To Move Offices August 2

Philadelphia Quartz Company, silicate of soda manufacturer, Philadelphia, is planning to move its offices on August 2 from 121 South Third street to new quarters in the Public Ledger building, Independence Square. The company is also celebrating the 117th anniversary of its founding in Philadelphia in 1831. Started by Joseph Elkinton in that year, the name was changed to the Philadelphia Quartz Company in 1864.

### Johnson Named Chairman Of Wisconsin ACS Section

Prof. William S. Johnson, of the University of Wisconsin, has been elected chairman of the Wisconsin section of the American Chemical Society. He succeeds Dr. Marvin J. Johnson of the university's department of biochemistry. Dr. Howard L. Ritter of the chemistry department of Wisconsin was named secretary, and Dr. Homer Adkins and Dr. Carl A. Baumann of the chemistry faculty were reelected to the national council of the society.

## Netherlands Indies Tin Council Holds Meeting

The Netherlands Indies Tin Council discussed means for exploitation of tin producing plants on the islands of Bangka, Billiton and Singkep at its first meeting, which took place recently, according to Aneta News Agency. The group is reported to have reached decisions concerning the supply of material for each of the works, closer cooperation in the selling of tin and tin ore, and the participation and representation of the islands at forthcoming meetings of the International Tin Study Group.

## Interport Commercial Named Selling Agent

Interport Commercial Corporation, New York, has been appointed sole selling agents for Herbs & Forest Produce, Ltd., Calcutta, India. The New York firms will handle sales of the Indian company's line of essential oils, gums, waxes, crude drugs, seeds, roots and other articles.

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# Botanical Drugs, Spices, Gums

A lull developed in the matter of adjusting spot prices to the current volume of spot demand and the price situation as it relates to replacements to be obtained from the 1948 collection of medicinal botanical drugs. Of late, quotations had been subject to considerable raking and cultivation in the interest of creating sound values for the time being at least. Last week, the market held very steady in all respects.

Condimental items were featured by the advance in prices on the very scarce cardamoms; an upping of the quotes on Yunnan cassia; a strengthening rise in Danish and Dutch yellow mustard seed; and a similar development in black pepper for later arrival. Declines in prices on mace, and nutmegs traced directly to the recent downward revision of export taxes in the Netherlands Indies. The new tax is 3 percent; formerly, it had been 20 percent. The reduction in replacement cost has been passed promptly to consumers here.

During the past week, the Department of Commerce released its import figures on balsams, botanicals, and gums for last March. Comparison with February imports was afforded and first quarter totals were provided for all articles reported.

Arrivals of imported botanicals, balsams, and gums in the month of March, 1948, gained 4,485,435 pounds over the February total. The following tabulation has elements of interest:—

| | Pounds | |
|---|---|---|
| | March | February |
| Balsams | 45,473 | 47,433 |
| Botanicals | 7,283,590 | 2,665,488 |
| Gums | 3,331,494 | 3,465,708 |
| Total | 10,664,064 | 6,178,629 |

A more definitive picture results from breaking down the above figures, as follows:—

| | Pounds | |
|---|---|---|
| | March | February |
| Balsams | 45,473 | 47,433 |
| Botanicals— | | |
| Medicinal | 1,665,590 | 1,287,166 |
| Industrial | 5,618,000 | 1,378,322 |
| Gums— | | |
| Aromatic | 22,187 | 93,538 |
| Mucilaginous | 3,312,204 | 3,372,170 |
| Total | 10,664,064 | 6,178,629 |

Reports concerning the domestic collection of botanics showed no new phases in the acquisition of the crop of 1948. Workers were not plentiful and early season results are conservative thus far.

## Balsams

**Fir**—Holding firm as to price, this article experienced little change in the conservative demand prevailing in the recent past. Sellers kept local quotations in line with the current cost of replacements. Only prompt needs of buyers reached the spot. Imports from Canada in March were 5 pounds; in February, 779 pounds.

**Tolu**—A steadier position developed following the last reduction in prices and the market was well maintained last week. March imports totaled but 251 pounds, comparing with 10,000 pounds arrived in February.

## Barks

**Cinchona**—According to the latest report of the Department of Commerce, importations last March totaled 31,640 pounds, comparing with 31,134 pounds arrived in February. Total first quarter arrivals were 115,640 pounds.

**Cramp**—Not much N.F. quality bark may be required but there is very little being carried over into the new collection season. Therefore, most sellers expect a reasonably steady market for the time being at least.

**Soap**—Official reports concerning imports give the March total at 28,558 pounds, against February at 81,772 pounds and the first quarter total of 110,330 pounds.

## Imports Detained by FDA

**New York**

**Week Ended June 18**

Aniseed, 197 bags: filthy.
Cassia, 190 bales: insect infested.
Celery seed, 80 bags: filthy.
Chrysanthemum, 20 cases: filthy.
Cornsilk, 32 bales: filthy.
Ergot, 200 bags: not NF.
Fennel seed, 284 bags: filthy.
Kola nuts, 45 bags: filthy.
Mace, 3 cases, filthy.
Nutmegs, 171 bags: moldy and wormy; shells.
Papaya leaves, 26 bags: diseased leaves.
Pepper, blck, 643 bags: moldy and insect bored; excessive siftings and pickings.
Pimento, 100 bags: filthy.
Sesame seed, 406 bags: filthy.
Tamarinds, 22 casks: filthy.
Turmeric, 480 bags: filthy.

*For Late Market Developments, See Page 4*

## *Market Trends*

**Prices Advanced**

*Drugs*

Ginger root, African, 1c. per lb.
Jamaica, No. 2, 1½c. per lb.

*Other Articles*

Cardamom, bleached, bold, 8c. per lb.
medium, 6c. per lb.
decorticated, Guatemalan, 25c. per lb.
Cassia, Yunnan, ½c. per lb.
Cloves, Zanzibar, ½c. per lb.
Mustard seed, Danish, yellow, ½c. per lb.
Dutch, yellow, ½c. per lb.
Paprika, Spanish, 1½c. per lb.
Pepper, black, futures, nearby, ½c. per lb.
distant, 1½c. per lb.

**Prices Reduced**

*Drugs*

None

*Other Articles*

Coriander seed, Argentine, ½c. per lb.
Mace, No. 1, Siaw, 5c. per lb.
East Indian, 7c. per lb.
West Indian, 25c. per lb.
broken, 5c. per lb.
Nutmegs, East Indian, 4c. per lb.
West Indian, spot, 1c. per lb.
futures, 1c. per lb.
Poppy seed, Dutch, ½c. per lb.
Turkish, futures, 2½c. per lb.
Sage, Dalmatian, ½c. per lb.

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 209.6 | 209.6 | 220.3 | 277.2 |

*(For Current Prices see Page 9)*

## Beans

**Vanilla**—According to a report issued by the Department of Commerce, large stocks of beans in Madagascar constitute a problem for shippers there. The stock was estimated at 1,984,000 pounds of which 441,000 pounds have deteriorated and won't be acceptable on the United States market. The 1948 crop was officially estimated at 838,000 pounds but private estimate them at 1,323,000 pounds. In a conference between the French government and representatives of the United States vanilla bean importers association, the American importers were requested to buy 220,000 pounds of beans in 1948 and 661,000 pounds in 1949. If that were done, the French government was willing to destroy 661,000 pounds of old crop and 441,000 pounds of new crop beans. The American importers, agreed to buy only 265,000 pounds in 1948 and 265,000 pounds in 1949 in view of the possibility of larger than normal crops in Mexico.

## Berries

**Juniper**—Once again, the Department of Commerce lumps imports of this article with those of sloe berries, the total arrival in March being set forth as 2,249 pounds against none in February. The first quarter total was 2,249 pounds. It seemed probable that most of the importation was juniper berries.

**Sloe**—A check with local botanical dealers showed very small stocks and virtually no demand—because sloe gin is not being made. The price quoted by dealers was minimum at 39c., which figure was extraordinarily higher than the last price at which agents for foreign shippers had sold very small quantities on this market. The reason given for the high price was that the goods actually in hand showed a cost warranting the quotation named. But no selling is being done at any price at the present time.

## Flowers

**Chamomile** — March imports totaled 29,357 pounds, comparing with the February arrival of none whatsoever. Total arrivals during the first quarter were 40,380 pounds.

**Lavender**—The supply situation on spot may be guessed from the fact that official records of the Department of Commerce fail to note any arrivals during the first quarter of this year. The market continued sluggish throughout the past week at unchanged prices.

**Saffron**—The activity on spot was very small and price conditions suggested possible shading of current quotations should a substantial order reach the market firm and for immediate fulfillment. Spanish goods packed in lithographed tins stood at $28 per pound and goods packed in wooden boxes were still offered at $25.

## Gums

**Arabic**—According to the Department of Commerce, March importations totaled

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Valerian

70

Women and valerian! In the 16th century, they perfumed linens with it. In recent times, it was a constituent of an American perfume popular with many women, revolting to others. Its turpentine-camphor odor is still craved by oriental women.

Broths and pottages made by North England women about 1550 were considered not worth eating unless well flavored by the root. Today, no one would eat them if they were.

Medically, one use today is to palliate the nervous symptoms developed by women at the menopause.

Did You Know That

THE PRESIDENTS

Born
July 4, 1872 . . . Calvin Coolidge, 29th President.

Died
July 4, 1826 . . . John Adams, 2nd President.
July 4, 1826 . . . Thomas Jefferson, 3rd President.
July 4, 1831 . . . James Monroe, 5th President.

THE STATES

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1,668,639 pounds, comparing with February arrivals at 1,859,130 pounds. Also, total arrivals during the first quarter of this year were 6,121,874 pounds.

**Asafetida**—March importations reached 22,487 pounds, against February arrivals at 26,276 pounds. The total import for the first quarter of this year became 48,763 pounds.

**Benzoin**—March records show no imports of this item. First quarter totals reached 11,260 pounds, all of which reached here in February.

**Karaya**—Latest data reveal March arrivals at 824,982 pounds, comparing with February figures at 601,664 pounds. This made total arrivals in the first quarter of this year a matter of 2,328,831 pounds.

**Locust Bean**—March imports totaled 457,211 pounds, against February arrivals of 267,239 pounds. This made 905,578 pounds the official importation for the first quarter of this year.

**Tragacanth**—In March, 361,372 pounds were imported. In February, there were 644,137 pounds. Therefore, total importations during the first quarter of this year were 905,578 pounds.

## Herbs and Leaves

**Buchu**—The market continued steady in price under relatively restricted demand. March imports totaled 3,090 pounds, comparing with the February arrival of 10,270 pounds. The total of imports during the first quarter of this year were 17,297 pounds.

**Digitalis**—Sales at this time draw against stocks imported in 1947. Official data concerning arrivals do not include any figures on arrivals during the first quarter of this year. The market held steady on the basis of the recent decline.

**Henbane**—March importations were relatively large, reaching 102,173 pounds, against 20,059 pounds imported in February. Total arrivals during the first quarter of this year were 131,232 pounds. The recently more competitive spot market was still prevalent and yet prices failed to undergo any further decline in their openly acknowledged position.

**Patchouli**—Considering the fact that 100,095 pounds of this leaf were imported during the first quarter of 1948, it is odd that there is very little of the merchandise available for sale out of spot stocks. It is supposed that the imports went direct to manufacturing consumers, mainly for the production of oil.

**Senna**—Prices held steady. Demand was routine. March imports reached 205,049 pounds, comparing with the February arrival of 83,235 pounds. The total of importations for the first quarter of this year reached 639,347 pounds.

**Stramonium**—Plentiful stocks have resulted from the first quarter importation of 93,772 pounds. Of this, the March arrival was 10,803 pounds, comparing with February arrivals at 42,561 pounds.

## Miscellaneous

**Balm of Gilead**—The market of quiet demand prevailed under price conditions recently developed along easier and lower lines. At the moment, it appeared to be a buyer's market, within reasonable limits.

**Cantharides**—Lower prices on Russian flies may be the result of arrivals of that article which are expected to take place in the not far distant future. Dealers doubted, however, that the Russian material could readily compete with the present low cost product of China.

**Kola Nuts**—According to the latest figures provided by the Department of Commerce, 48,953 pounds of this material reached here in March, which figure compares with the absence of arrivals in February. Total imports, first quarter, were 71,656 pounds.

**Nux Vomica**—During March, 148,410 pounds were imported, a substantial rise from the 10,920 pounds reaching here in February. Total imports during the first quarter of this year were 260,150 pounds.

## Roots

**Gentian**—A total of 43,738 pounds of this root were imported in March. None had arrived in February. Total imports during the first quarter of the year were 93,450 pounds.

**Ipecac**—Some gain in import offerings has been reported but most of the goods come from Central America and not from Brazil. March imports totaled but 112 pounds and only 2,821 pounds came in during the first quarter of this year.

**Licorice**—Tobacco interest continued to take excellent quantities. March imports amounted to 3,722,544 pounds, comparing with 61 pounds of record for February. The total of 6,853,327 pounds were imported during the first three months of this year.

**Orris**—March imports dropped sharply to 8,816 pounds, comparing with February arrivals at 22,400 pounds. The total importations for the first quarter of this year were 73,275 pounds.

**Rhubarb**—The steadier to firmer market continued undisturbed. March importations totaled 10,080 pounds, a gain over the total lack of arrivals in January and February. The total of arrivals during the first quarter of this year was 10,080 pounds.

**Sarsaparilla**—March importations rose to 9,499 pounds from the low February total of 747 pounds. Total landings in the first quarter of 1948 were 12,577 pounds.

**Senega**—Though the market was considered to be $1.95 to $2 per pound on the

—Continued on page 83

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# Protective Coatings Materials

Attempts to stabilize prices dwarfed in importance actual changes in the protective coatings market last week. One maker of zinc pigments tacitly admitted that the job was too big, extending a previous three-month price guarantee only until the end of July because of "very uncertain conditions of the metal markets and other conditions beyond our control." However, at the same time, a manufacturer of synthetic resins, announced that a 10-percent slash in alkyds would remain good throughout the balance of the year.

There was no immediate reaction to these moves. Other zinc pigment producers failed to indicate whether they would also limit their guarantees, but as of late in the week they likewise make no move to advance prices either. Although one other alkyds manufacturer adjusted quotations too, there was no word from the trade whether price guarantees would become generally adopted in the synthetic resins industry.

Among other developments during the week, a one-half-cent advance on anatase and calcium-extended grades of titanium dioxide by one maker resulted in a range for these products. Dealers in Spanish oxide reported an improvement in the supply position, with shipments of all but the top grade requiring only four weeks. Blanc fixe quotations were increased $2.50 and $2 per ton, effective July 1, for the dry, by-product and pulp grades, respectively.

One line of maleic resins was reduced one-half cent per pound. Another maker dropped listings 2 cents to 3 cents. A manufacturer of both pure and modified phenolics upped the former one-half cent, while, at the same time, lowering the latter by three-quarter cent to one-and-one half cents per pound.

Natural resins and shellac were steady during the week. Lacquer materials were similarly stable. Casein remained firm, despite continued strength in the Argentine.

## Market Trends

**Prices Advanced**

None

**Prices Reduced**

None

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 202.3 | 202.3 | 207.1 | 179.8 |

(For Current Prices see Page 9)

## Prime Pigments

**Black, Carbon**—The Bureau of Mines reported that April production totaled 108,169,000 pounds, a drop from the 109,691,000 pounds in March and the 108,817,000 pounds in April, 1947. Shipments during April aggregated 97,832,000 pounds, compared with 109,937,000 pounds during the preceding month and 115,418,000 pounds in April, last year. Producers stocks at the close of April amounted to 92,028,000 pounds, opposed to 81,691,000 pounds in March and 25,134,000 pounds in April, 1947. Exports of carbon black in April reached 21,668,000 pounds, as against 28,984,000 pounds in March and 23,397,000 pounds in April, last year, according to the Department of Commerce.

**Blue, Ultramarine**—Arrivals during the week aggregated 140 casks of ultramarine blue from Hull.

**Green, Chrome**—A boost in trade sales was reported to have produced a comparable increase in buying inquiry for this pigment during the week. Price-wise, the material remained stable. Inventories were generally described as adequate to handle current demand.

**Lead Pigments**—Business, which has been on the wane for some weeks, was said to be taking an upward spurt last week. The added demand was attributed to an increase in trade sales and the general expectation of good weather. Meanwhile, stocks of both the pigment and the pig-lead raw material were short. There was no appreciable improvement in sight. Price-wise, there was no change.

**Lithopone**—Demand remained heavy during the week. Prices on both ordinary and titanated grades were stable. Stocks continued low, and there was no expectation of any improvement in the situation until more titanium dioxide became available.

**Orange, Chrome**—In abundant supply, this material was on better call last week, owing mainly to the recent upsurge in trade sales. Quotations were steady at 29½c. per pound. Inventories were fully adequate to handle the current business load.

**Red, Iron Oxide**—Dealers reported improvement in the Spanish oxide situation last week. Recent shipments have eased the supply position of this material considerably. Warehouse stocks are not big, but deliveries for all except the top grade are being made on a one-month basis. Meanwhile, stocks of Persian Gulf oxide remaining from the January shipment are being doled out to regular customers in limited amounts. However, since this is a small-quantity item, there is no apparent concern over supplies. Meanwhile, pure reds and Indian red were somewhat tight, owing to the current practice of using domestic reds in paint formulations. The price structure was firm all along the line.

**Titanium Dioxide**—One maker of this material announced a ½c.-per-pound increase on anatase grades and the calcium-extended product. Other manufacturers failed to go along with these advances, and as of late in the week there was no word as to what action they would take. Current quotations list the anatase, chalk-resistant material at 18c. to 19c. per pound and the anatase, plain product at 18c. to 19c. The calcium base pigment is quoted at 6¾c. to 7½c. per pound. As for the supply situation, there was no material improvement last week, nor was any expected until late Fall. Demand was still extremely active.

**Yellow, Chrome**—In good supply last week, this pigment remained firm at 29½c. per pound. Demand was better.

**Zinc Pigments**—One maker extended a previous three-month price guarantee through July. The statement of that company said that uncertain conditions in the metal markets and other circumstances had limited the guarantee only until July 31. Other producers did not immediately follow along with this action, but as of last week they gave no indication of making any price increases either.

## Fillers and Extenders

**Blanc Fixe**—Advances of $2.50 and $2 per ton were announced last week, effective July 1, for the dry, by-product and pulp grades, respectively. The increase will bring the carload price of the dry, by-product material up to $77.50 per ton, works. Less-carload quantities will list at $85 per ton, works. The 66⅔ percent, pulp grade will be priced at $67 per ton, carload, and $73 per ton, l.c.l., works. As to the supply situation, conditions remained tight. Demand was still outpacing production.

**Calcium Carbonate** — With the market continuing unchanged, arrivals of 1,200 bags of whiting from Hull provided the sole note of interest last week.

**Kyanite**—Importations during the week totaled 20 tons of kyanite ore from Port Sudan.

**Mica** — Arrivals during the past week aggregated 21 blocks and 551 cases of mica from Buenos Aires, Calcutta and London. In the market, conditions were on a par with those of previous weeks.

**Pumice**—The supply picture remained virtually unchanged last week. Stocks were good. As for demand, inquiries were said to be continuing slow but steady, a normal condition for this material. Prices were firm, as they have been for some time.

**Pyrophyllite**—The standard, 200 mesh product continued to list at $11 to $11.50 per ton, a price that has continued firm for many months. Other grades were equally stable. Consuming interest was steady. Supplies were adequate.

**Rottenstone**—This material retained its firm tone, as supplies continued abundant and demand was unchanged.

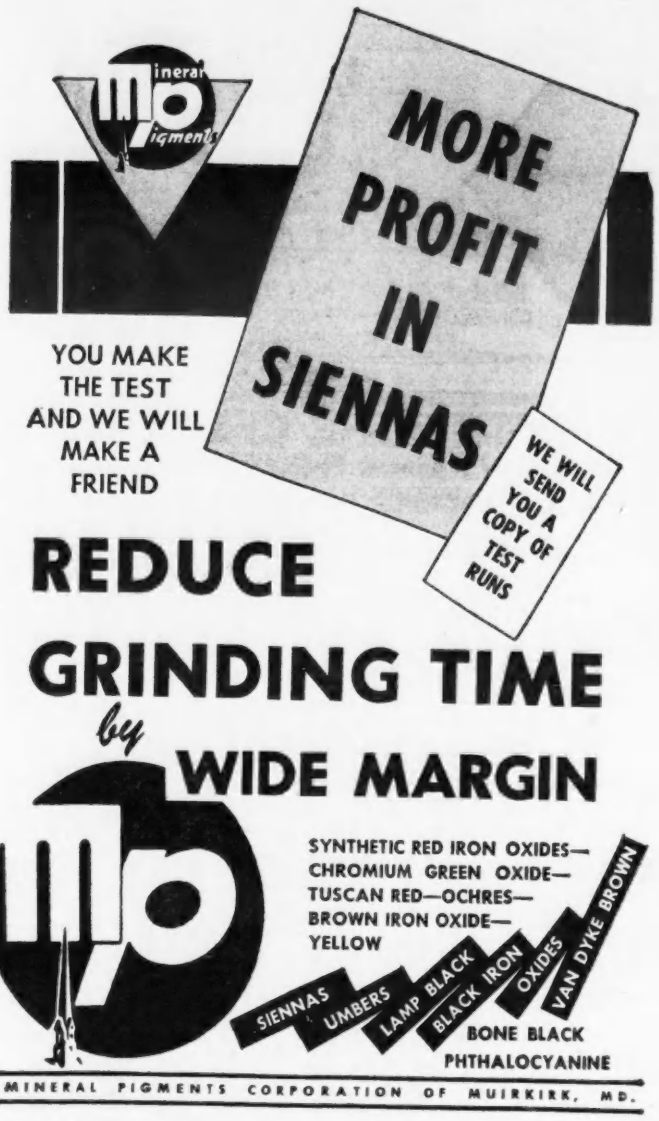
**Smalt**—Slow, but steady, business was reported by dealers for this material. Stocks were good. Prices were at levels of former weeks during the period under review.

## Synthetic Resins

**Acrylic Resins** — In balance for some time, these materials showed no substantial change in market position during the past week. Prices remained firm.

**Alkyd Resins**—Despite recent increases in the cost of soybean oil and phthalic anhydride, a price slash averaging 10 percent was effected by one alkyds manufacturer last week along with a guarantee of fixed prices during the balance of the year. The action, which was taken two

For Late Market Developments, See Page 4



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5

weeks earlier than the previously expected July 1 date, was designed to counterbalance irregular price competition and to establish a firm price base, according to a statement by a company official. As of late last week, there was no indication that other resins makers would go along with this policy of guaranteed prices. Meanwhile, another alkyds producer announced price changes in two directions on that company's line, decreases of ¼c. to 1c. per pound for certain grades and increases of ½c. to 1½c. per pound for others. Business was generally described as slow, and inventories were believed to be fuller than they have been in some time.

**Cumarone - Indene Resins** — A 2c.-per-pound reduction was affected during the month by one manufacturer on one grade. The supply situation, meanwhile, showed no improvement, as demand, particularly for the lighter-colored grades, continued extremely heavy. The practice of using polystyrene resins in place of cumarone-indenes in floor tiles continued, despite the higher costs of the former. One maker said there was a fair supply of some darker grades, but that lighter grades were available only on contract.

**Hydrocarbon Resins**—Delays were still reported for most grades of the petroleum type. Demand remained intense. Price-wise the market was without change.

**Maleic Resins**—A ½c.-per-pound reduction was affected by one manufacturer of these materials. At the same time, another maker decreased listings on that company's line by 2c. to 3c. per pound. As to supply, the persisting shortage of maleic anhydride remained the key bottleneck to all-out production. Demand was on a par with previous levels.

**Melamine Resins**—These materials were without particular feature during the period under review. Demand continued steady. Prices were unchanged. Supplies were adequate.

**Phenolic Resins**—One manufacturer, a maker of both pure phenolics and modified grades, upped quotations on the former by ½c. while, at the same time, reducing listings on the latter by ¾c. to 1½c. per pound. All materials, but those derived from cresol, were in good supply. Buying interest was steady.

## Natural Resins

Although the market could hardly be called active, there was some limited trading during the week. The mild weakening reported earlier for Macassar and Philippine copals was apparently only a sporadic fluctuation. Prices for these materials in New York were firm, although at lower quotations. No particular change in the supply situation was noted, as inventories remained spotty. Conditions abroad were without special feature. Arrivals during the week aggregated 1,253 bags of copal gum from Matadi and Antwerp.

**Shellac**—Steady for the most part, the market in Calcutta exhibited a slightly stronger tone late in the week. However, listings of New York dealers continued unchanged. The expected pinch in stocks of orange lacs, meanwhile, became evident. Dealers indicated that inventories would diminish during coming weeks, particularly for the better grades. Nevertheless, judging by their inquiries, buyers apparently were not too concerned over this development. The general practice of hand-to-mouth orders continued, and there was little evidence that consumers would take any immediate action to insure replacements. Bleached grades remained at 64½c. and 74½c. per pound for bonedry and refined lacs in bags, respectively. Lemon No. 1 was listed at 69c. to 70c.; lemon No. 2 brought 67c. to 68c. per pound; superfine lac commanded 63c. to 64c., and TN shellac was listed at 61c. to 62c. per pound. Importations last week totaled 220 bags of buttonlac, 200 bags of kireelac, 1,250 bags of seedlac and 650 bags of shellac from Calcutta.

## Lacquer Materials

**Dicyclohexylphthalate** — This plasticizer was said to be receiving increasing interest from resins makers. More material was reported to be available to consumers than heretofore. However, expanded production was still contemplated. Prices continued firm at 42½c., carload, and 43c., less-carload.

**Phthalates**—The price structure of these materials was entirely firm during the period under review. There were no price fluctuations anywhere in the market, nor were any contemplated. Dibutyl phthalate continued at a range of 35½c. to 37c. per pound, tanks; diethyl phthalate was steady at 30c. to 32c. per pound, tanks, and dimethyl phthalate was unchanged at 26c. per pound, tanks. Buying interest was still weak, a condition which was said to have expanded inventories. Less war-surplus dimethyl phthalate was believed afloat on the market than heretofore.

**Tricresyl Phosphate**—Demand was said to be continuing at a steady pace. Supplies were at former levels. Prices as of last week were unchanged, with at least one manufacturer adopting for the time being a policy of holding the line. It was emphasized, however, that this does not mean that the recent boost in cresylic acid will be absorbed, but that just for the

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present prices will be maintained. Elsewhere in the market, there was a general expectancy that quotations would be up shortly.

## Miscellaneous Materials

**Asbestos**—The dearth of longer-fibered grades continued to be widely reported in the market, despite full-scale production. Demand was just too strong, according to asbestos suppliers. As to the shorter grades, they were in better availability, but there again they could hardly be called in free supply. Meanwhile, producers indicated that they could see no sign of relief in the market, at least, not in the immediate future. Price-wise, the market remained firm. Arrivals during the week aggregated 9,085 bags of asbestos fiber from Lourenco Marques and Duban.

**Casein**—Despite continued strength in the Argentine during the week, the New York casein market was substantially unchanged. Quotations remained at a range of 28c. to 29½c. per pound, with listings of most sellers hovering around 28½c. Although interest in this country was still very small, Argentine creamery producers last week were still not willing to reduce listings, since they are confident that there will be a revival of interest in imported casein around September-October. This view is supported by the currently low domestic casein production. Apparently, Argentine suppliers reason that with domestic casein reserves at a low ebb, manufacturers of paper coatings, paints, glue and adhesives will have to turn to the imported product, despite the increasing use of substitutes. Meanwhile, domestic casein remained firm at 31c. to 33c. per pound, but dealers viewed the prices as nominal. Arrivals during the week aggregated 2,932 bags of casein from Buenos Aires.

**Glue**—Bone glue makers reported considerable progress in making up the lag between supply and demand. Of course, the supply position was still not in balance by last week, but producers were hopeful of righting things within the next few weeks. Hide glues, however, remained woefully short, with demand continuing to outstrip existing inventories. Prices all along the line were on a par with levels of previous weeks. Importations during the week totaled 221 bags of bones from La Plata, 100 cases of glue from Le Havre, 114 rolls and 478 bales of gluestock from Santa Marta, Barranquilla and Liverpool.

**Gypsum**—The market was without appreciable change during the period under review, as supply, demand and prices levels were all maintained at those of previous weeks. Arrivals last week aggregated 6,753 tons of crude gypsum from Breton.

**Oleates**—Despite a recent 3c. per pound advance for lead oleate, this market continued firm last week. Business was described as moderate. Supplies were ample.

**Stearates**—A 3c. spread continued to exist during the week for all quantities of lead stearate, as other makers failed to follow along with the recent advance by one producer. Buying inquiry was described as fair. Supplies were ample.

**Zein**—There was no change in this market during the week. Business continued at a normal rate. Supplies were adequate to that demand. Prices remained at 25c. to 30c. per pound.

## Naval Stores

The records of the gum naval stores markets over the week ended June 25 were as follows:—

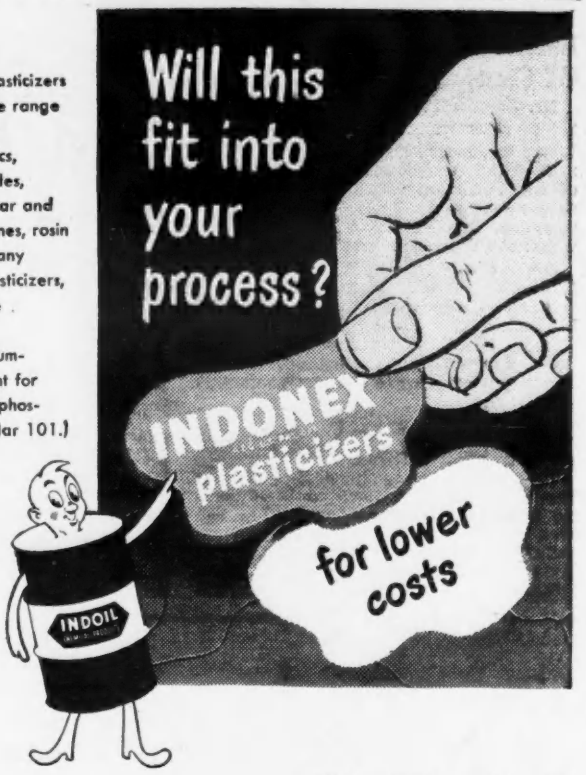
### Gum Rosin

Price per 100 lbs.

| | Savannah Exchange (Low of range) | | | | | c.l., f.o.b. N.Y. | l.c.l., ex whse. |
|---|---|---|---|---|---|---|---|
| | Mon. | Tues. | Wed. | Thurs. | Fri. | Friday | |
| B | $6.50 | $6.50 | $6.50 | $6.50 | $6.50 | $8.35 | $9.10 |
| D | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 8.45 | 9.20 |
| E | 7.00 | 7.00 | 7.00 | 7.00 | 7.00 | 8.45 | 9.20 |
| F | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.45 | 9.20 |
| G | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| H | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| I | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| K | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| M | 7.40 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| N | 7.45 | 7.35 | 7.25 | 7.25 | 7.25 | 8.55 | 9.30 |
| WG | 7.48 | 7.40 | 7.32 | 7.32 | 7.32 | 8.70 | 9.45 |
| WW | 7.65 | 7.55 | 7.45 | 7.57 | 7.57 | 8.80 | 9.55 |
| X | 7.65 | 7.55 | 7.45 | 7.57 | 7.57 | 8.80 | 9.55 |
| | Drums | | | | | | |
| Sales | 450 | 451 | 450 | 200 | ... | | |
| Receipts | 757 | 650 | 1,335 | 301 | 350 | | |
| Shipm'ts | ... | 100 | 1,855 | 1 | ... | | |
| Stocks | 9,165 | 9,715 | 9,195 | 9,495 | 9,825 | | |

### Gum Turpentine

| | Savannah Exchange (Bulk) | | | | | New York (ret. dms.) tanks, f.o.b. N.Y. ex whse. (7 lbs.) | l.c.l. (7 lbs.) |
|---|---|---|---|---|---|---|---|
| | Mon. | Tues. | Wed. | Thurs. | Fri. | Friday | |
| Per gal. | .40 | .40 | .40 | .40 | .40 | .49 | .61 |
| Sales, bbls. | 111 | 205 | ... | ... | ... | | |
| Receipts, bbls. | 271 | 182 | 971 | 121 | 681 | | |
| Shipments, bbls. | 159 | ... | 1,004 | 138 | 240 | | |
| Stocks, bbls. | 5,824 | 6,006 | 5,973 | 5,956 | 6,397 | | |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| Grade | 633½ | 634½ | 638½ | VG |
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| Flash °F. | 450 | 460 | 510 | 460 |
| Pour °F. | 35 | 40 | 70 | 20 |
| Viscosity 210° F., Saybolt sec. | 110 | 125 | 518 | 103 |
| Evap. loss mg/10g (1 hr. 100° C.) | 5 | 5 | 3 | 4 |

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SEATTLE—Van Waters & Rogers, Inc.

## Kistler Named Chairman Of Central Mass. ACS

Dr. Samuel S. Kistler, associate director of research of the Norton Company, Worcester, Mass., has been elected chairman of the Central Massachusetts section of the American Chemical Society. He succeeds John R. Erickson of the same company, first chairman of the section, which was organized last year.

Other officers named were Prof. Harry B. Feldman of the Worcester Polytechnic Institute, chairman-elect, and Alexander L. Gordon, chief chemist of the Vellumoid Company, Worcester, secretary. Dr. Olier L. Baril of the Holy Cross College chemistry department was re-elected treasurer.

### Thomas C. Mee Named To Head Georgetown Alumni

Thomas C. Mee, president of the Thomas C. Mee Company, paint and shellac manufacturer, Pawtucket, R. I., has been elected president of the alumni association of Georgetown University, Washington. He succeeds Thomas A. Dean, president of the Dean Veneer Manufacturing Company, Chicago. Prior to organizing his own company, Mr. Mee served as New England sales manager for the Mantrose Corporation, Brooklyn.

## Krumbhaar Chemicals Names Cleveland Representative

Krumbhaar Chemicals, Inc., South Kearny, N. J., has appointed the Ohio Mineral Spirits Company exclusive representatives for the Cleveland metropolitan area. Effective July 1, the Ohio Mineral Spirits Company will handle sales of the Krumbhaar organization's line of synthetic resins and oils in that territory.

### Emery Develops News Plasticizer

Emery Industries, Inc., Cincinnati, has added two new operating units to its plasticizer plant, it was announced last Wednesday. The company also revealed development of a new plasticizer, "Plastolein 9715," which is described as suitable for the vinyls, where low volatility and low oil extraction is of major importance. It is now available in commercial quantities.

## Alkydol Labs Publishes Vinyl Varnish Bulletin

Alkydol Laboratories, Inc., Cicero, Ill., has published a bulletin entitled, "Alkydol Vinyl Varnish Products," which describes a new line of materials recently developed by that company. The products, a series of synthetic resins, are said to have great value as replacements for alkyd resins, varnishes, lacquers and similar materials.

The bulletin outlines the problems encountered in present-day varnishes, a description of the Alkydol process and a sample formulation. Copies of the data sheet may be obtained by writing the firm at 3242 South Fiftieth street, Cicero 50, Ill.

## Goodrich Co. Opens New Research Center

The B. F. Goodrich Company, Akron, Ohio, has opened its new research center at Brecksville, Ohio. The facility consists of six buildings on a 261-acre site, which contain eighty-one individual laboratories, an assembly hall seating 250 and a 10,000 volume library.

In addition to probing into crude and man-made rubber, the company plans to conduct intensive research in such fields as chemicals, plastics, agriculture, horticulture and the application of nuclear energy to rubber manufacturing. Atomic energy's usefulness and effects in rubber and related materials will also be studied.

## Du Pont Names Dawson To Succeed Weismuller

Dr. D. H. Dawson, now sales director of the pigments department of E. I. du Pont de Nemours & Co., Wilmington, Del., will become assistant general manager of the department on July 1. He succeeds F. H. Weismuller, who becomes general manager when J. F. Daley moves to the organic chemicals department as general manager. All changes are effective July 1.

Dr. Dawson joined the company in 1933 as a chemist in the Baltimore plant of the pigments department. He was transferred to the research laboratories in Newark, N. J., in 1934, where he was assistant to the director of research. Later in that year he became head of research division at the Baltimore plant.

He was transferred to the pigments laboratory at Newport, Del., in 1940, where he became supervisor of the research division and of technical service. In 1944, he was advanced to assistant director of research on pigment colors. He was named director of sales in 1946.

## Ansbacher-Siegle Pigment In Commercial Production

Production in commercial quantities of a new iron blue pigment called "Alkiron Blue," which is said to possess resistance to alkalis, has been announced by Ansbacher-Siegle Corporation, Staten Island, N. Y. Described as being superior to the usual iron blues in jetness of masstone, durability and resistance to attack by chemical agencies, the color is designed to appeal particularly to the paint, enamel and lacquer industry.

## Bids Wanted

**Calking lead,** 27,000 pounds, Aviation Supply Office (Navy Department, Philadelphia 11) invitation 1851, June 30.

**Carbon dioxide,** liquid, as required from July 1, Army Ordnance Department (Aberdeen Proving Ground, Md.) invitation 236, June 30.

**Caustic soda,** 26,100 13-ounce containers, various deliveries, Post Office Department (Washington 25, D. C.) invitation 363, July 16.

**Cement,** liquid, 35,800 3-ounce containers; household, 6,250 1⅞-ounce tubes; rubber, 1,615 1-ounce containers, Army Signal Corps (Philadelphia 45) invitation 85, July 8.

**Citric acid,** crystals, 120 pounds, Army Signal Corps (Philadelphia 45) invitation 1782, June 30.

**Hydroquinone,** 1,400 pounds, Army Signal Corps (Philadelphia 45) invitation 1782, June 30.

**Metal polish,** 1,200 pounds and 600 pints, Purchasing Officer, Panama Canal (Washington 25, D. C.) schedule 9007, July 6.

**Milk powder,** 75,500 pounds, Veterans Administration (Washington 25, D. C.) invitation 204-S, June 30.

**Paint, enamel,** 100 gallons, U. S. Penitentiary, Leavenworth, Kans., invitation 3-2896, June 29; 4,440 gallons, Bureau of Federal Supply (Washington 25, D. C.) invitation 5H-64993-R, July 1; **various,** 610 gallons, U. S. Penitentiary, Leavenworth, Kans., invitation 3-2896, June 29; 5,750 gallons, Army Quartermaster (Camp Campbell, Ky.) invitation 38, June 29; 800 gallons, Bureau of Federal Supply (Washington 25, D. C.) invitation 5H-64993-R, July 1; 528 gallons, Bureau of Federal Supply (New York 7) invitation BO-W & NY-W-13238, June 29; 910 gallons, Bureau of Federal Supply (Washington 25, D. C.) invitation 5H-64994-R, July 1.

**Phenolformaldehyde resin,** 450,000 pounds, Aviation Supply Office (Navy Department, Philadelphia 11) invitation 1848, June 29.

**Potassium bromide,** photographic, 150 pounds, Army Signal Corps (Philadelphia 45) invitation 1782, June 30.

**Protective compound,** plastic, strippable, 13,200 gallons, Army Ordnance Department (Metuchen, N. J.) invitation 446, June 29.

**Putty,** 2,500 pounds, Army Quartermaster (Camp Campbell, Ky.) invitation 38, June 29.

**Soap,** cleaning paste, 45,000 pounds, Post Office Department (Washington 25, D. C.) invitation 394, July 21; scouring powder, 480 pounds, Bureau of Federal Supply (Washington 25, D. C.) invitation 3-W-64982-R, June 29; laundry, 46,800 pounds; laundry chip, 40,750 pounds; powder, 4,536 pounds; toilet, 62,107½ pounds; various deliveries, invitation 3-W-65046-R, July 1.

**Sodium carbonate,** 7,000 pounds, Army Signal Corps (Philadelphia 45) invitation 1782, June 30.

**Sodium sulphite,** photographic, 18,000 pounds, Army Signal Corps (Philadelphia 45) invitation 1782, June 30.

**Sodium thiosulphate,** 4,800 pounds, Bureau of Federal Supply (New York 7) invitation NY-W-13296, June 29.

**Soya flour,** 35,000,000 pounds, Chicago Quartermaster Purchasing Office (Chicago 9) invitation 959, June 29.

**Sweeping compound,** 50,000 pounds, Post Office Department (Washington 25, D. C.) invitation 397, July 21.

**Trichloroethylene,** 66,950 pounds, Army Quartermaster (Columbus 15, Ohio) invitation 67, June 29.

**Turpentine,** gum spirits, 1,250 gallons, Bureau of Federal Supply (Washington 25, D. C.) invitation 5H-64996-R, June 29.

**Vegetable oil,** salad, 64,938 gallons, Chicago Quartermaster Purchasing Office (Chicago 9) invitation 943, July 7.

**White lead,** in oil, 1,000 pounds, U. S. Penitentiary, Leavenworth, Kans., invitation 3-2896, June 29; 1,050 pounds, Bureau of Federal Supply (New York 7) invitation BO-W & NY-W-13238, June 29.

**Zinc chromate,** yellow, dry, 250,000 pounds, Aviation Supply Office (Navy Department, Philadelphia 11) invitation 1884, July 2.


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## *Zinc Products Production, Consumption: 1947*

Preliminary figures on stocks, production and shipments of zinc-base products made entirely or partly from purchased zinc scrap and residues during 1947 have been issued by the Bureau of Mines. The figures, in short tons, are as follows:

| Product | Stocks Dec. 31, 1946. Gross weight | Produced in 1947 — Gross weight | Zinc content From scrap | Zinc content From other materials | Shipped in 1947. Gross weight | Stocks Dec. 31, 1947. Gross weight |
|---|---|---|---|---|---|---|
| Redistilled slab zinc | 755 | 55,879 | 55,376 | ..... | 55,726 | 908 |
| Remelt spelter | 421 | 7,226 | 7,029 | ..... | 7,375 | 272 |
| Remelt die-cast slab | 534 | 8,595 | 7,821 | ..... | 8,957 | 172 |
| Other zinc metal products | 320 | 5,205 | 5,053 | ..... | 5,455 | 70 |
| Zinc dust | 1,472 | [1]30,580 | 27,533 | 1,987 | 30,883 | 1,159 |
| Zinc oxide (lead-free) | 13,860 | [1]158,899 | 18,863 | [2]106,639 | 160,746 | 12,013 |
| Zinc sulphate[3] | 732 | [1]18,580 | 4,203 | 3,070 | 16,868 | 2,444 |
| Zinc ammonium chloride[3] | 715 | [1]13,934 | 3,355 | ..... | 13,899 | 750 |
| Zinc chloride[3 4] | 1,868 | [1]25,012 | 10,604 | 1,111 | 24,347 | 2,533 |
| Lithopone | [5]..... | [5]..... | 17,856 | [5]..... | [5]..... | [5]..... |
| Other zinc-base chemicals | 342 | 1,164 | 559 | 95 | 1,306 | 200 |
| Miscellaneous | ..... | 1,176 | 1,036 | ..... | 1,176 | ..... |
| Total secondary zinc | | | 159,758 | | | |

[1] Total U. S. production.
[2] Includes zinc recovered in zinc oxide from remelt die-cast slab.
[3] Dry basis.
[4] Includes chromated zinc chloride.
[5] Bureau of Mines not at liberty to publish.

## Rubber Technology Meeting To Be Held in Los Angeles

A new plastic, improved materials for food packaging, and the use of sound waves to measure the properties of rubber are among the subjects to be discussed at a two-day meeting sponsored by the American Chemical Society's rubber division and the Los Angeles Rubber Group in Los Angeles on July 22 and 23.

The sessions, with headquarters at the Mayfair hotel, will hear twenty-one reports prepared by rubber chemists from university and industrial laboratories. The paper on the measurement of rubber properties by sound, entitled "Measurements of Mechanical Properties of Rubbers at Audio Frequencies by a Twin Transducer" and prepared by John D. Ferry, Robert S. Marin, and Edwin R. Fitzgerald of the University of Wisconsin, will be presented at the opening session, and "Uses and Applications of 'Tuf-Lite,' a New Plastic Material," by H. R. Thies, of the Goodyear Tire & Rubber Company, Akron, is among the papers scheduled for the closing session.

### Polishes Output Down in Canada

Production of polishes, floor waxes and similar products in Canada fell off 7 percent during 1947, according to a recent report, which registered the total value of these materials produced during the year at $8,900,000. Imports of polishes during the year were valued at $446,082.


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But the pioneering spirit which still inspires our technical staff is far more important. Their single-track devotion to the ideal of perfection is your best guarantee of the continuing superiority of MAPICO COLORS. For these men are not only concerned with maintaining MAPICO quality, they are ever alert to improve it.
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with assurance that nothing better is commercially available.
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## Alumatone Corp. Opens New Canadian Factory

The Alumatone Corporation of Los Angeles, Calif., has established a branch to manufacture its silver, gold and aluminum finishes in Toronto, Canada. Located at 372 Bay street, the new factory will handle all Canadian business and will ship its products to all countries of the British commonwealth. Ross Frank and Walter Stewart have been placed in charge of the new plant.

## Southeast Pa. ACS Headed by Shubrooks

G. E. Shubrooks, chief chemist and metallurgist of the Hamilton Watch Company, Lancaster, Pa., has been elected chairman of the Southeastern Pennsylvania section of the American Chemical Society. He succeeds Prof. John B. Zinn of Gettysburg College.

Robert B. Rohrer, assistant to the research director of the Armstrong Cork Company, Lancaster, Pa., was named vice-chairman of the section, and H. A. Reehling, supervisor of the floor plant laboratory of the same firm, was re-elected secretary-treasurer. Chosen to the executive committee were Alfred E. Galloway, chemistry supervisor of the Pennsylvania Department of Health, and Prof. Charles A. Sloat of Gettysburg College.

## Glidden Co. Offers New Technical Service

The Glidden Company, Cleveland, Ohio, is offering a new technical service to its customers that is designed to relieve them of many of the details involved in the production of finishes to meet a customer's individual needs. Developed at the company's Chicago division, the service entails the use of a technical service director and a staff of trained specialists to solve problems involved in the production of finishes.

Technical service directors appointed by the company are C. O. Hutchinson at Chicago, Howard P. Wertman in Reading, Pa., Charles M. Dunn in Cleveland, and R. R. Abernathy in San Francisco.

In applying the new service, the technical service director surveys the customer's individual coating needs and production facilities and interprets the problem to his research, formulation and finishing process specialists. He supervises and coordinates the efforts of these specialists and directs the pretesting of the selected coating and prepares specifications of the coating and for its correct usage.

## G.E. Advances Two In Plastics Division

The General Electric Company, Pittsfield, Mass., has appointed George Alexander assistant to the manager of its laminated plastics plant in Coshocton, Ohio, and has named Edward G. Gray works engineer of the plant.

Mr. Alexander, who will be in charge of the company's new varnish plant, has been a member of the General Electric organization since 1930. He started as a development chemist in the plastics division laboratory in Pittsfield, and in 1937 was transferred to the laminated products division at Lynn, Mass. In 1942 he was named division materials engineer; three years later was appointed assistant division engineer, and was named works engineer at Coshocton in 1946.

Mr. Gray, who has been with the company since 1925, joined the plastics division in 1928 as sales representative in Cleveland, Ohio. In 1945 he was named sales manager of laminated products and two years later became commercial engineer of laminated products, with headquarters at Coshocton.

## British Paint Exports Up

Exports of paints, varnishes, pigments and chemicals from the United Kingdom during April reached £5,720,000, compared with a monthly average of £5,100,000 during the first quarter of 1948, according to a recent report. The report indicates that the British industry is optimistic toward the possibility of reaching the monthly export target set by the government of £5,900,000 before the end of this year.

### *Metal Cans Shipments: April*

Total shipments of metal cans during April, 1948, showed slight increase, according to the Bureau of the Census. These figures are based on metal can shipments expressed in terms of the weights of steel consumed in the manufacture of the cans shipped. In the month of April metal can shipments on this basis amounted to 208,587 short tons, as compared with the 207,726 short tons shipped during March.

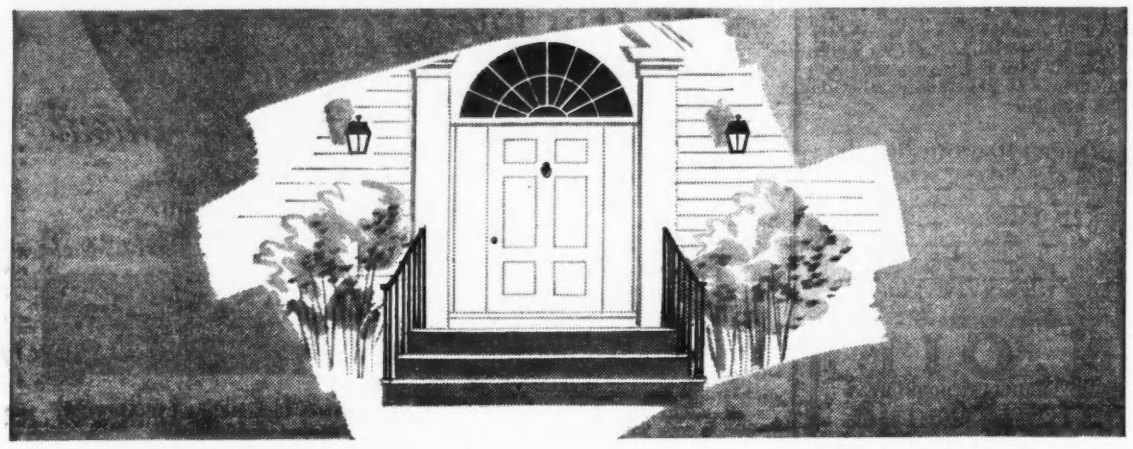
## *Trade Briefs*

**Lac** research work being conducted by the Indian Central Lac Research Institute, Namkum, Bihar, India, is designed to make that organization the world center for lac information.

**Oil production** will be started next year in the Vogelkop region of Dutch New Guinea by the New Guinea Petroleum Company, according to Aneta News Agency.

**Melvin H. Baker,** president of the National Gypsum Company, addressed a recent meeting of leaders of the home building industry in the Statler hotel, Buffalo, N. Y.

**Henry A. Gardner** Laboratory has published a booklet describing a variable impact tester recently developed by the laboratory. Copies may be obtained from the laboratory at 4723 Elm street, Bethesda 14, Md.



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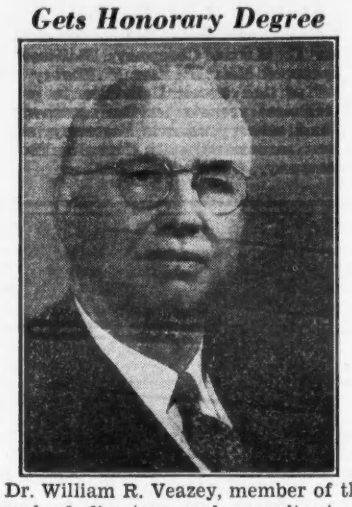
### *Gets Honorary Degree*



Dr. William R. Veazey, member of the board of directors and consultant on the coordination of research, patents and product development of Dow Chemical Company, was recently awarded an honorary degree of doctor of science by Westminster College of Pennsylvania.

### Du Pont Increases Output Of 'Ludox' Colloidal Silica

E. I. du Pont de Nemours & Co., Wilmington, is now producing its "Ludox" colloidal silica in commercial quantities. The company has completed a new unit to manufacture the product at the East Chicago, Ind., works of its Grasselli chemicals department, and the material is being produced in solutions with a concentration of 30 percent.

### American Optical Issues Chart

The American Optical Company, Southbridge, Mass., has published a new chart suggesting the proper respiratory protection against more than 150 specific dusts, vapors and gases. The chart presents a summary of recommendations made by the company's safety engineering division. Free copies of the chart may be obtained by writing the company at Southbridge.

## Wharry Wins Golf Honors At N.Y. Paint Club Tourney

G. Austin Wharry, of G. A. Wharry & Co., came in with the low gross score in class A competition at the recent golf tournament of the New York Paint, Varnish and Lacquer Association at the Bonnie Briar Country Club, Larchmont, N. Y. Mr. Wharry's accomplishment won him both the Harry Hillman cup and the president's trophy. Runner up in class A was Charles A. Malizia, North Jersey Paint Company.

In class B competition, low gross winner was Dean C. Anderson, Brooklyn Varnish Manufacturing Company, and low net winner was James E. Spencer, Harshaw Chemical Company. William S. Woodward, American Zinc Sales Company, was low gross scorer in class C, and Harold L. Davis, D. H. Litter Company, turned in low net score in that class.

Among the guests at the tournament, D. J. Brand, Brazil Oiticica, Inc., New York, captured low gross honors, and the kicker's handicap was won by Mr. Winters.

## USDA Moves N.Y. Offices

The Department of Agriculture has moved its New York offices from 150 Broadway to various locations throughout the city. The northeast area office of the Commodity Credit Corporation is now located at room 1304, 67 Broad street, where the telephone number is Digby 4-8300.

The city office for marketing of the Production and Marketing Administration and the shipping and storage division of the Commodity Credit Corporation have been re-located at 90 Church street, with the new telephone number being Rector 2-9100.

### Holland, Russian Zone Trade Pact Reported

Holland will ship chemical products, superphosphate and rubber, among other products, to the Russian zone of Germany under the terms of a recently concluded trade agreement reported by Aneta News Agency. In return, Holland will receive potassium, electrochemical material and instruments and chemical products.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STEAM DISTILLED WOOD TURPENTINE

This is a pure Steam Distilled Wood Turpentine, containing no impurities or adulterants of any kind. It is clear and colorless and has an unusually mild "flat" odor. CROSBY Turpentine conforms to federal and ASTM specifications for Steam Distilled Wood Turpentine.

| | SPECIFICATIONS Max. | Min. | Typical Analysis |
|---|---|---|---|
| Specific Gravity at 15.5/15.5°C | 0.875 | 0.860 | .861 |
| Refractive Index at 20°C | 1.478 | 1.465 | 1.466 |
| Unpolymerized Residue (38N-$H_2SO_4$) | 2.0% | ..... | 0.8% |
| Distillation: | | | |
| Initial Boiling Point | 160°C | 150°C | 154°C |
| Distilling below 170°C | ..... | 90% | 95% |

Properties

Flash Point: Approximately 98°F (Teg open cup).
Optical Rotation: Above + 25°.
Solvent Power: (Kauri Butanol): Approximately 57 ml.
(Aniline Point): Approximately 18°C.
(Mixed Aniline Point): Approximately 44°C.

Commercial Information

Code Word: TURPS.
Containers:
Tank Cars: 8000 and 6000 gallons.
Compartment Cars: 3 x 2000 gallons.
Drums: 56-gallon galvanized drums, net weight, 392 lbs. (Gross weight approximately 450 lbs.).
Cans: Full line of lithographed tin cans, packed in corrugated cartons, contents in standard U. S. gallons, imperial gallons, and litres.

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COBALT HYDRATE
Finely ground pink powder. Metal content approximately—61%.

COBALT ACETATE
Fine, free-flowing crystalline salts, water soluble. Metal content—23.25%.

COBALT CARBONATE
Finely ground pink powder of low alkali content. Metal content —45%.

COBALT SULPHATE
Free-flowing red crystal of low alkali content. Metal content—21%.

Standard packages of 100-lb. kegs and 400-lb. barrels. Quantities less than 100-lbs. also available. All finest quality, guaranteed full metal content. Write for prices and samples. Can make shipment same day order is received.

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## Wabash Valley ACS Elects Senkus Chairman

Dr. Murray Senkus, of the research and development department of the Commercial Solvents Corporation, Terre Haute, Ind., has been elected chairman of the Wabash Valley section of the American Chemical Society. He succeeds William G. Kessel, of the chemical faculty of Indiana State Teachers College.

Dr. Ralph E. Bennett, bacteriologist of the Commercial Solvents Corporation, who was section treasurer last year, was named vice-chairman; Herbert F. Smith, chief chemist of the Merchants Distilling Corporation, Terre Haute, secretary, and W. H. Alman, Commercial Solvents, treasurer. Dr. Jerome L. Martin, director of research, Commercial Solvents, was re-elected to the national council of the society, and Dr. Paul D. Wilkinson, professor of chemistry at the Indiana State Teachers College, was chosen alternate councilor.

## Harwick Gets Agency For Resin Stabilizers

Harwick Standard Chemical Company, Akron, Ohio, has been named national distributor for "Stabelan," a line of stabilizers for PVC resins and resin copolymers, made by the Stabelan Company, Cleveland.

Three types of stabilizers will be marketed under the name Stabelan. They are:—type A, for improvement of aging qualities of vinyl resins in sunlight; type XL, for stabilizing action in high temperature processing as well as for ultra violet and sunlight aging, and type G, for use with organic reds in addition to stabilizing action under ultra violet and sunlight and for perfecting film clarities.

## *Current Prices*

—*Continued from page 33*

| | | | |
|---|---|---|---|
| Zinc oxide, pigment, French process, red seal, bgs., c.l., ship't point, frt. alld. | lb. | .12¼ | — |
| l.c.l., works | lb. | .12½ | — |
| white seal, bgs., c.l., ship't point, frt. alld. | lb. | .13¼ | — |
| l.c.l., works | lb. | .13½ | — |
| USP, ctns., c.l., ship't point, frt. alld. | lb. | .14¼ | — |
| l.c.l., same basis | lb. | .14½ | — |
| Zinc oxide Pac. coast prices ¾c. higher; bbls., prices ½c. higher than bgs. | | | |
| Resinate, fused, 9% Zn, powd., solution, 50%, dms., c.l., works. | lb. | .0365 | — |
| Silicofluoride, bbls., works | lb. | .11 | — |
| Stearate, ctns., 2,000 lbs. | lb. | .48 | — |
| smaller lots | lb. | .49 | — |
| Sulphate, cryst., 22% Zn, bgs., c.l., works, frt. alld. | 100 lbs. | 4.65 | — |
| l.c.l., same basis | 100 lbs. | 5.05 | — |
| flake, 25½% Zn., bgs., c.l., works, 100 lbs. | | 5.15 | — |
| l.c.l., works | 100 lbs. | 5.55 | — |
| powd., 36% Zn., bgs., c.l., delvd., same basis | 100 lbs. | 7.50 | — |
| l.c.l., same basis | 100 lbs. | 8.00 | — |
| Zinc sulphate in bbls., 40c. higher | | | |
| Sulphide, pure, bgs. c.l., dlvd. | lb. | .11½ | — |
| l.c.l., works | lb. | .11¾ | — |
| Barium pigment, bgs., c.l., dlvd. | lb. | .08 | — |
| l.c.l., works | lb. | .08½ | — |
| Calcium pigment, bgs., c.l., dlvd. | lb. | .08 | — |
| l.c.l., works | lb. | .08¼ | — |
| Luminescent pigment, frt. alld. | lb. | 1.00 | 3.00 |
| Magnesium pigment, bgs., c.l., dlvd. | lb. | .08 | — |
| l.c.l., dlvd. | lb. | .08½ | — |
| Zinc sulphide and pigment, Pac. coast prices ¾c. higher; bbl. prices ½c. higher than bgs. | | | |
| Sulphocarbolate, NF, gran., bbls., dms. | lb. | .28 | .29 |
| powd., bbls. | lb. | .31 | .32 |
| Yellow (see Yellow, zinc). | | | |
| Zinc-cadmium sulphide, fluorescent, cns., frt. alld. | lb. | 2.00 | 2.80 |
| Zinc-formaldehyde sulphoxalate, basic, dms., works, frt. alld. | lb. | .17 | — |
| normal, dms., works, frt. alld. | lb. | .35 | — |
| Zinc-iron oxide pigment, bgs., c.l. dlvd. | lb. | .08½ | — |
| Pac. coast | lb. | .09¼ | — |
| l.c.l., dlvd, E. of Rockies | lb. | .09 | — |
| Pac. coast | lb. | .09¾ | — |
| Zircon (see Zirconium silicate). | | | |
| Zirconium acetate, solution, bbls., works. | lb. | 25½ | — |
| basic carbonate, solution, bbls., works. | lb. | .30½ | — |
| Hydride, cns., works | lb. | 7.00 | — |
| Oxide, 85%, 92%, grd., bbls. or bgs., any quantity, works. | lb. | .23 | — |
| 98½-99%, white, grd., bbls. or bgs., works. | lb. | 1.50 | — |
| lump, electric-fused, bgs., c.l., works. | lb. | .44 | — |
| 5 tons, works | lb. | .44½ | — |
| 2,000 lbs. and less, works | lb. | .45 | .48 |
| milled, electric-fused, bgs., c.l., works. | lb. | .59 | — |
| 5 tons, works | lb. | .59½ | — |
| 2,000 lbs. and less, works | lb. | .60 | .63 |
| Oxychloride, cryst., ctns., 5 tons, works. | lb. | .29½ | — |
| Silicate, granular, bgs., c.l., works. | lb. | .03¾ | — |
| 5 tons, works | lb. | .04 | — |
| 2,000 lbs. and less, works | lb. | .04¼ | .04¾ |
| milled, bgs., c.l., works | lb. | .04¾ | — |
| 5 tons, works | lb. | .05¼ | — |
| 2,000 lbs., works | lb. | .05¾ | .06¾ |
| refined, bgs., c.l., works | lb. | .11 | — |
| 5 tons, works | lb. | .11½ | — |
| 2,000 lbs. and less, works | lb. | .12 | .16 |
| Sulphate, basic, cake, ctns., c.l., works. | lb. | .37½ | — |
| 5 tons, works | lb. | .38 | — |
| 2,000 lbs and less, works. | lb. | .38½ | .39 |

## *Synthetic Resins*

The customary monthly listing of prices for synthetic resins and other branded paint materials was printed in the June 7 issue of OPD.

## Martin Adds to Staff

Glenn L. Martin Company, Baltimore, has appointed Miss Eleanor F. Horsey to the staff of the chemical division to prepare technical reports on the company's resins and other products. Formerly, she had been associated with Hercules Powder Company, Wilmington, Del.

LACQUERS
Automotive — Furniture, etc. Base Solutions — Thinners

SOLVENTS
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PLASTICS
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# Oils, Fats and Waxes

Market for oils and fats continued to sag last week and all changes were in the decline column. This brought the index number down to 234.2 against 230.2 a month ago and 183.2 for the same time last year. Most of the declines were fractional. Edible oils were easier with crude cottonseed oil, and increased offers for June shipment weakened new crop oil. Coconut oil was off fractionally, with copra which declined $10 per ton. Corn oil also was lower, with sales transacted at one cent below previous business. Peanut oil was unchanged with trading confined to an occasional tankcar at former quotations. Soybean oil was reduced fractionally for all positions.

Smaller consumption of refined oils caused prices to drop about one cent per pound. This reflected the reduced demand for margarine and shortening.

Lower prices for olive oil foots for shipment affected the spot market and quotations were cut 2 cents per pounds.

Drying oils continued unsettled. Linseed oil was reduced fractionally, and the recent advance was not sustained owing to the continued poor business and offerings of resale oil at concession. Tung oil market continued weak and sellers further lowered prices which did not attract buyers.

Tallow and greases were off fractionally, and only limited quantities were taken at the decline. The higher grades were reported steady and in light supply, while lower grades were easy and the price spread between grades was increased. Degras was easier under increased competition and prices were cut from 2 to 3 cents per pound.

The 1948 Spring pig crop totaled 51,421,000 head, a decrease of 3 percent from last Spring, according to the Bureau of Agricultural Economics. The number of sows farrowing this Spring was 8 percent below last Spring. The number of pigs saved per litter was about 6 percent higher than last Spring and about 3 percent higher than the 1937-46 average. Reports on breeding intentions for the coming Fall indicate about the same number of sows to farrow as last Fall. The combined 1948 Spring and Fall pig crop is now expected to be 82,400,000 head. A combined pig crop this size would be 2 percent below 1947 and 5 percent below the 10-year average. The number of hogs six months old and over on farms and ranches June 1 was 2 percent less than last year and, except for the low number on June 1, 1946, was the smallest since June 1, 1938.

## Market Trends

**Prices Advanced**

None

**Prices Reduced**

Coconut oil, ½c. per lb.
Copra, $10 per ton.
Corn oil, 1c. per lb.
Cottonseed oil, 1c. per lb.
Degras, 2c. to 3c. per lb.
Grease, ½c. to 1c. per lb.
Linseed oil, 2/10c. per lb.
Peanut oil, ref., 1c. per lb.
Olive oil foots, 2c. per lb.
Rapeseed oil, 2c. per lb.
Soybean oil, crude, 1c. per lb.
refined, 1c. per lb.
Tallow, ½c. per lb.
Tung oil, ½c. per lb.

**Comparative Price Indexes**

(100=August 1, 1914)

| Last week. | Prev. week. | Last month. | Last year. |
|---|---|---|---|
| 234.2 | 240.1 | 230.2 | 183.2 |

(For Current Prices see Page 9)

## Cottonseed Oil

Trading in bleachable cottonseed oil futures was restricted last week. Market remained steady and the strength in July featured the market. Short covering and reported new buying advanced quotations of the July delivery which was reflected in the deferred positions.

Heavy liquidation in futures and lower prices for crude oil on Friday caused the market to decline sharply, losses ranging from 70 to 105 points. New crop deliveries scored the largest declines.

Old crop crude cottonseed oil was in light supply but was easier following sales at 33c. per pound, tanks, f.o.b. mills. Later June oil was offered at 32c., same basis. August was sold at 25c. per pound, same basis, while September was easier and offered at 23½c.

Refined cottonseed oil production in May was indicated at 60,035,000 pounds, consumption 91,090,000 pounds and factory and warehouse stocks May 31 were 126,912,000 pounds against 168,750,000 pounds the previous month. Crude oil production was 47,743,000 pounds, consumption, 64,854,000 pounds factory and warehouse stocks May 31, totaled 43,054,000 pounds, according to the Census Bureau.

Previous April-June allocation of 150,000 pounds of cottonseed oil to the Union of South Africa was cancelled at the request of that government.

Prices of refined bleachable prime summer yellow cottonseed oil in tankcars on the N. Y. Produce Exchange for the week ended June 25 follow:—

| | Sales | Cents per pound—High | Low | Close |
|---|---|---|---|---|
| July | 53 | 37.00 | 34.50 | 36.00@36.10 |
| September | 87 | 26.85 | 25.90 | 26.60S |
| October | 50 | 25.15 | 24.40 | 24.30@24.45 |
| December | 23 | 24.45 | 23.80 | 23.60@23.85 |
| January | .. | .... | .... | 23.25B |
| March | 2 | 24.00 | 24.00 | 23.70B |
| May | .. | .... | .... | 23.25B |

Total sales—215 tankcars.

Crude oil was sold at 33c. per pound, tankcars, Southeast, and later was offered at 32c. f.o.b. Texas for prompt shipment.

*Memphis.* — Crude cottonseed oil quiet, nearby quoted at 34c. per pound, tankcars, f.o.b. mills, and September 24½c., Valley. Crude soybean oil nominal at 26½c. immediate shipment, same basis. Cottonseed meal, 41 percent offered at $89 per ton, mills June-July and $77 October. Cottonseed hulls, $14 per ton bulk and $20 sacked, mills, prompt shipment. Heavy showers throughout this section favorable to cotton crop.

## Linseed Oil

Lack of improvement in the demand for linseed oil unsettled this market and quotations were reduced 2/10c. per pound last week. Another weakening factor was the offering of resale oil below open quotations by some consumers, who were disposed to sell linseed oil and purchase tung oil at a differential of 5½c. per pound. Steady declines in tung oil have reduced the price to 22½c. per pound, tankcars New York delivery. Trading at the decline continued slow. Raw linseed oil was quoted at 28.20c. per pound, tankcars, June-July delivery and 28c., August-December in zone 3. Drums, carlots were 1.2c. per pound higher.

Purchases of 26 tankcars of raw linseed oil at 28½c. per pound, tankcars, f.o.b., Houston, Texas, June 15 were announced by the Department of Agriculture.

Linseed oil production in May totaled 52,905,000 pounds, consumption, 40,248,000 pounds and factory and warehouse stocks May 31 were 131,442,000 pounds against 134,511,000 pounds the previous month, according to the Census Bureau.

Preliminary 1948 quotas for exports of Indian flaxseed were indicated at 11,251 tons and linseed oil, 3,352 tons. Amounts allocated to each country follows: Flaxseed, United Kingdom, 6,000 tons; Egypt 2,100; Switzerland 1,425; New Zealand, Norway and Portugal 300 each; Czechoslovakia 248; France and the Netherlands 225 each and the Middle East 128. Linseed oil, United Kingdom 2,000 tons; Switzerland 475; Portugal, New Zealand and Burma 100 each; France and the Netherlands 75 each; Czechoslovakia 80; Middle East 73; Norway and China 50 each; Hong Kong, Malaya, Straits Settlements, 25 each; Arab Sheikdom and Ceylon 20 each; British East Africa 18; Mauritius 15 and West Africa and Portuguese East Africa 13 each.

*Minneapolis.* — Demand for linseed oil slumped as prices advanced to 27.8c. per pound in zone 1 for June-July shipment and interest in forward oil dropped away as August-December was quoted at 27.6c. Late in the week there was a reaction in the market that brought oil down to 27.6c. in the spot market and 27.4c. in deferred with a .2c. discount quoted by some mills for large round lots. Price on forward oil was only .2c. over the government support price and it would not be surprising if demand again picked up as buyers received another chance to fill needs at a relatively low price. Mill production was well maintained but shipping instructions slowed somewhat as wet weather curtailed painting operations and slowed movement of small lots of oil. Tank car buyers were still urging immediate shipment and crushers were obliging.

Shipments of linseed oil, in pounds, were as follows:—

| | 1947-48 | 1946-47 |
|---|---|---|
| This week | 7,400,000 | 2,289,000 |
| Since Sept. 1 | 298,124,000 | 224,120,000 |

**Flaxseed**—Improved trading stiffened the market, seed advancing 5 cents per bushel.

*Minneapolis*—Demand for flaxseed continued brisk and prices firmed after a slight dip early in the week, quoting steadily at a $6.10 basis. Crusher buyers were not quite as aggressive for supplies but there was a steady demand from merchandisers who were filling orders or accumulating round lot supplies for later sale.

Worry about crushing stocks for the remainder of the season, or until the new crop starts to move in July, was just about elimi-

For Late Market Developments, See Page 4

TALLOW FATTY ACIDS GLYCERINE STEARIC ACID
WHITE OLEINE USP RED OIL
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TALLOW FATTY ACIDS
Extra Light Color
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nated as a market factor during the past fortnight. Liberal cash receipts and a better selling attitude on the part of the country helped to swell crusher holdings to the desired figure. Crop news was mostly optimistic following excellent rains in the major flax belt during the critical period for the bulk of the crop. According to the Cargill crop bulletin "flaxseed is filling in southern Minnesota and early fields are in bloom in North Dakota. Top soil conditions in North Dakota halted seeding and it is doubtful whether full acreages were planted in that section." The report further added "Elsewhere in the main growing area prospects point to average or better than average yields."

Shipments of flaxseed in bushels were as follows:—

| Bushels— | Receipts 1947-48 | Receipts 1946-47 | Shipments 1947-48 | Shipments 1946-47 |
|---|---|---|---|---|
| This week | 282,200 | 22,100 | 37,400 | 10,200 |
| Since Sept. 1 | 22,449,200 | 10,865,500 | 3,970,500 | 4,736,200 |

## Cake and Meal

**Cottonseed Meal**—Some trading in cottonseed meal, 41 percent was reported at $89 per ton, f.o.b. mills in the Valley. October shipment was quoted at $77, same basis.

**Linseed Meal**—Market remained steady. Demand subsided, though moderate volume of sales was reported.

*Minneapolis.*—Demand for linseed meal was only fair after heavy rains blanketed most of the feeding area and encouraged consumers to hold back on all feed purchases. Local prices held steady at $70 to $71 in the spot market with $1 premium for August shipment. Sellers were not as aggressive and shipping instructions were brisk, keeping the market clear of any surplus supply.

Shipments of linseed meal, in pounds, were as follows:—

| | 1947-48 | 1946-47 |
|---|---|---|
| This week | 9,540,000 | 4,800,000 |
| Since Sept. 1 | 33,660,000 | 46,652,000 |

## Other Vegetable Oils

**Coconut**—Trading was slow and the market was weak with competing oils. Crude oil was off ½c. to ¾c. per pound, and quoted at 24c. per pound, tankcars, f.o.b. Pacific coast for first half July shipment and 23½c. for second half and August shipment at 23c. June was sold at 25c., same basis. Imports of Philippine coconut oil totaled 39,586,790 pounds from January 1 to May 29, 1948, inclusive, were reported by the Bureau of Customs.

**Copra**—This market was easier and declined about $10 per ton. Sales were reported at $295 per short ton, c.i.f. Pacific coast for prompt shipment. Quotations were entirely nominal and quoted at $300 same basis for June-July and $290 for August-shipment.

**Corn**—Business was inactive. Market was lower with competing oils. Crude oil was sold at 33c. with previous sales at 34c. per pound, tankcars, f.o.b. mills. Refined oil was quoted nominally at 38c., same basis.

**Oiticica**—Inquiry was restricted to drum lots with sales reported at 21c. per pound, in moderate quantities, New York delivery. Reports from Brazil stated that the oiticica crop in the State of Ceara is in excellent shape and production will be heavy.

**Olive**—Offers of olive oil foots were freer for shipment and quoted at 17¼c. per pound, tankcars, and 18½c. drums, carlots New York basis, for prompt delivery. Denatured oil was available at $3 per gallon, drums, same basis. Interest in edible continued limited to spot delivery. Prices were unchanged and fairly steady. Prices of olive foots on spot were reduced to 21½c. per pound, tankcars and 23c. drums carlots. Denatured olive oil on spot was offered at $3.15 per gallon, drums in sizable quantities.

**Peanut**—Light sale of crude oil reported at 33c. per pound, tankcars, f.o.b. mills. Inquiry slow and tone of the market was fairly steady. Refined oil remained dull and nominal at 38c. per pound, tankcars and 40½c. drums, delivered East.

**Rapeseed**—Lack of buying interest kept this market easy and nominal. Refined oil was lower and quoted at 28c. per pound, tankcars, New York for prompt delivery.

**Soybean**—Prices were easier for prompt and forward delivery. Trading was slow. Crude oil was fractionally lower. June shipment declined to 25½c. per pound, tankcars f.o.b. mills. July was offered at 25c., August 23½c. and October 19c. same basis denoting a decline of ½c. to 1c. as to position. Refined edible oil was reduced about 1c. to 29c. per pound, tankcars, delivered East. Refined technical grades also were off 1c. per pound. Previous April-June allocation of 150,000 pounds of soybean oil to the Union of South Africa was cancelled at the request of that government.

Prices of refined bleachable soybean oil, in


ASPHALTS
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PETROLEUM SOLVENTS
WAXES
C. A. HELLER CO., INC.
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Cable Address: Cahelco, New York


## *Margarin Output Larger*

Margarin production in April was 27,322,410 pounds larger than for the same month last year, according to statistics compiled by the Bureau of Internal Revenue:—

| | April Pounds 1948 | April Pounds 1947 |
|---|---|---|
| Production of uncolored oleomargarin | 61,139,509 | 41,469,080 |
| Withdrawn tax-paid | 62,711,670 | 37,347,578 |
| **Used in Uncolored Margarin** | | |
| Butter culture | ..... | ..... |
| Butter flavor | 220 | 262 |
| Citric acid | ..... | 73 |
| Coconut oil | 13,879 | 1,007,730 |
| Corn oil | 74,082 | 287,361 |
| Cottonseed flakes | ..... | 5,500 |
| Cottonseed oil | 30,027,151 | 13,808,972 |
| Cottonseed stearin | ..... | 45 |
| Derivative of glycerin | 104,302 | 67,638 |
| Diacetyl | 320 | 142 |
| Lecithin | 90,388 | 53,250 |
| Milk | 10,176,670 | 7,009,085 |
| Monostearin | 46,537 | 45,630 |
| Neutral lard | 11,177 | 103,973 |
| Oleo oil | 19,256 | 97,818 |
| Oleo stearin | 175,159 | 241,404 |
| Oleo stock | 600 | 7,830 |
| Peanut oil | 1,138,577 | 2,162,300 |
| Salt | 1,702,029 | 1,295,553 |
| Soda, benzoate of | 43,800 | 32,760 |
| Soybean oil | 18,108,323 | 15,546,218 |
| Sodium sulfoacetate | 1,287 | ..... |
| Soybean stearin | ..... | 6,280 |
| Vitamin concentrate | 9,442 | 6,474 |
| Total | 61,750,295 | 41,816,328 |
| Production of colored oleomargarin | 12,939,625 | 5,717,635 |
| Withdrawn tax-paid | 12,351,362 | 1,799,863 |
| **Used in Colored Margarin** | | |
| Butter flavor | 37 | 63 |
| Coconut oil | 193,990 | 2,828,263 |
| Color | 4,444 | 5,698 |
| Corn oil | 4,410 | 2,525 |
| Cottonseed flakes | ..... | 50 |
| Cottonseed oil | 6,152,566 | 586,320 |
| Derivative of glycerin | 10,784 | 11,676 |
| Diacetyl | 20 | 11 |
| Lecithin | 15,002 | 6,529 |
| Milk | 2,193,706 | 959,933 |
| Monostearin | 19,206 | 1,000 |
| Neutral lard | ..... | 12,519 |
| Oleo oil | ..... | 10,304 |
| Oleo stock | ..... | ..... |
| Peanut oil | 260,329 | 54,064 |
| Salt | 391,682 | 178,017 |
| Soda, benzoate of | 10,310 | 4,148 |
| Soybean oil | 3,904,718 | 1,113,934 |
| Vitamin concentrate | 1,837 | 859 |
| Total | 13,163,039 | 5,768,113 |


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tankcars, on the N. Y. Produce Exchange for the week ended June 25 follow:—

| | Sales | Cents per pound—High | Low | Close |
|---|---|---|---|---|
| July | .. | .... | .... | 28.50A |
| September | .. | .... | .... | 25.25A |
| October | .. | .... | .... | 24.25A |
| December | .. | .... | .... | 22.75A |
| January | .. | .... | .... | 22.75A |
| March | .. | .... | .... | 22.75A |
| May | .. | .... | .... | 22.75A |

Sales—None.

**Tung**—Trend of prices continued downward and liberal offerings and light demand brought prices down another ½c. Tankcars were available at 22½c. per pound, New York basis, for prompt and forward delivery. Bids below this figure were reported refused in some directions, but there was more selling interest than buying. Oil in drums was nominal at 24c. to 25c. per pound, depending upon quantity. Advices from China stated that export trade has been paralyzed by the wide disparity between official rates of exchange at which exporters must purchase Chinese currency and the black market rate of exchange which determines the rate of exchange. Department of Agriculture reported purchases of 9 tankcars of domestic tung oil at 25c. and 1 at 24½c. per pound, f.o.b. works in the South, June 14-15. Tung oil production totaled 1,302,000 pounds in May compared with 2,708,000 pounds in April. Consumption was placed at 10,039,000 pounds in May against 10,994,000 pounds the previous month. Stocks at factory and warehouse May 31 were 49,355,000 pounds, against 52,579,000 pounds the month previous, it was reported by the Census Bureau.

*Los Angeles*—Most vegetable oil prices dropped last week.

Oils in tankcars were quoted as follows:—Castor, cold pressed, 26c. per pound, f.o.b. this city; coconut, crude, 24c. per pound, f.o.b. this city; cottonseed, crude, 32c. per pound, f.o.b. Texas; sesame seed, crude, 32c. per pound, Texas; seseame seed, crude, 32c. per pound, f.o.b. San Francisco; soyabean, crude, 26c. per pound, f.o.b. Decatur; tung, 23c. per pound, f.o.b. this city.

## Fats and Greases

**Greases**—This market was easier and moderate sales of the better grades were reported at a decline of ½c. per pound. Consuming inquiry was quiet. The better grades were in limited supply and well held while lower grades plentiful and easy. The price spread was increased about ½c. per pound between the high and lower grades. Choice white was quoted at 16½c. per pound, loose works, yellow, 15c., and house, 14¾c.

**Lard**—Strength of hogs kept the lard market steady last week. Trading was spotty and confined to prompt delivery. Previous April-June commercial procurement allocation of 400,000 pounds of lard to the Union of South Africa was cancelled at the request of that government.

**Tallow**—Prices were easier and declined ½c. under moderate trading last week. Buying interest was light and spotty. Market was steady for fancy and extra because of limited stocks, while special was in liberal supply and easy. Sales of fancy were reported at 16½c. per pound, works, loose, and extra at 16¼c. Special was reduced to 15¾c. and inactive. Previous April-June allocation of 220,000 pounds of inedible tallow was transferred from commercial to PMA procurement.

## Animal Oils

**Degras**—Consuming inquiry has subsided and recent heavy trading took place at lower prices. Neutral grades were reduced 2c. per pound while common was unchanged.

**Grease Oil**—Trading was fair. Prices were unchanged and fairly steady.

**Neatsfoot Oil**—Scarcity of neatsfoot stock has increased the cost of pure neatsfoot oil. Demand has been affected by the high cost of this oil, and has increased the use of substitutes. Producers quoted 15 deg. at 45c. to 46c. per pound, 20-deg. 44c. to 45c., and 30 deg. 43c. to 44c. in drums, as to quantity.

**Oleo-Oil**—Supplies were reported light. Trading was quiet. Extra was quoted nominally at 32c. per pound.

**Oleo Stearin**—Inquiry was fairly active. Offerings were light and quoted nominally at 29c. to 30c. per pound, tierces.

## Fish Oils

**Cod**—Market was quiet, but steady. Limited supplies on spot were closely held at former levels.

**Refined Fish**—Demand showed no improvement and the market was unsteady, reflecting the easier tone in other drying oils. Quotations were unchanged, with intimations that asking prices could have been shaded for sizable quantities.

**Whale**—Reports from Japan stated that fifteen ships of the first group of the Japanese whaling expedition in the Antarctic are expected to leave Japan early in November.

## Fatty Acids

**Red Oil**—Market remained steady, despite the easier tone in grease and tallow. Demand was moderate, mainly for prompt delivery. Prices for all grades were maintained.

**Stearic Acid**—Active request was reported for delivery against former orders. Prices were unchanged and well held for all grades, and were not affected by the lower pressing stock market.

## Waxes

**Candellila** — Demand was limited to small quantities for spot delivery. Quotations were unchanged.

**Ouricury**—While demand was restricted to actual needs, the market remained unchanged and steady. Crude was quoted at 66c. to 67c. per pound, and refined, 70c. to 71c. per pound on the spot.

**Spermaceti**—Trading was inactive. Market was easier and prices off 2c. per pound. Blocks were quoted at 41c. to 42c., and cakes 42c. to 43c. per pound, as to quantity.


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## *Oils, Fats Production Consumption: May*

The preliminary statistics of the factory production and consumption of animal and vegetable fats and oils for May, 1948, as compiled by the Bureau of Census, follow:—

**Vegetable Oils**

| | Pounds | |
|---|---|---|
| | Production | Consumption |
| Babassu, crude | [2] | 1,591,660 |
| Refined | 625,000 | 682,000 |
| Castor, No. 1, crude | 7,483,000 | 8,065,650 |
| No. 3, crude | 2,252,000 | 1,532,000 |
| Dehydrated | 4,680,000 | 3,127,000 |
| Sulphonated | ..... | 231,000 |
| Chinawood or tung oil | 1,362,000 | 10,630,680 |
| Coconut, crude | 45,362,000 | 54,088,080 |
| Refined | 26,955,000 | 29,514,000 |
| Corn, crude | 1,500,000 | 1,054,000 |
| Refined | 13,862,000 | 3,911,000 |
| Cottonseed, crude | 47,745,000 | 64,854,000 |
| Refined | 69,655,000 | 91,030,000 |
| Linseed | 52,905,000 | 40,248,000 |
| Olive, edible | ..... | 95,600 |
| Inedible | ..... | 4,630 |
| Sulphur or olive foots | ..... | 45,000 |
| Oiticica | ..... | 494,000 |
| Palm, crude | ..... | 3,910,660 |
| Refined | [2] | [2] |
| Peanut, crude[1] | 18,287,000 | 17,989,660 |
| Refined | 16,873,000 | 19,177,000 |
| Rapeseed | ..... | 408,000 |
| Sesame | ..... | 591,000 |
| Soybean, crude | 128,843,000 | 122,138,000 |
| Refined | 111,814,000 | 120,972,000 |
| All other | 5,608,000 | 5,847,000 |

**Animal Oils**

| | | |
|---|---|---|
| Lard, rendered (including neutral lard and rendered pork fats) | 142,096,000 | 12,564,000 |
| Neatsfoot oil | 99,000 | 283,000 |
| Tallow, edible | 4,969,000 | 3,222,000 |
| Inedible | 89,849,000 | 100,088,000 |

**Fish and Marine Mammal Oils[3]**

| | | |
|---|---|---|
| Cod | 47,000 | 631,000 |
| Codliver | 1,000 | 717,000 |
| Marine mammal | ..... | 4,405,000 |
| Other fish | [4]3,889,000 | 9,039,000 |
| Other liver | 359,000 | 828,000 |

**Greases**

| | | |
|---|---|---|
| Greases (including garbage and house), other than wool | 45,418,000 | 44,331,000 |
| Wool grease | 1,729,000 | 2,102,000 |

**Secondary Products**

| | | |
|---|---|---|
| Animal fats and oil fatty acids | 14,529,000 | 13,160,000 |
| Animal foots, 100% basis | 1,738,000 | 1,926,000 |
| Fish and marine mammal fatty acids | 2,366,000 | 479,000 |
| Grease and lard oil | 3,237,000 | 2,359,000 |
| Oleo oil | 1,635,000 | 167,000 |
| Red oil or oleic acid | 5,581,000 | 3,974,000 |
| Stearic acid | 5,369,000 | 4,347,000 |
| Foots, from fish and marine mammal oil (100% basis) | [5] | 540,000 |
| Stearin, animal, edible | 603,000 | 1,084,000 |
| Inedible | 1,434,000 | 455,000 |
| Stearin, vegetable oil, winter | 8,337,000 | 11,256,000 |
| Tallow, oil | 772,000 | 704,000 |
| Vegetable oil fatty acids from foots and other than from foots including fatty acids from tall oil, palm oil, refuse, etc | 6,858,000 | 5,484,000 |

**Other Products**

| | | |
|---|---|---|
| Glycerin, chemically pure (100% basis) | 7,704,000 | 6,776,000 |
| crude oil (100% basis) | 15,482,000 | 15,977,000 |
| high gravity and yellow distilled (100% basis) | 6,385,000 | 7,379,000 |
| Hydrogenated oils, edible | 119,305,000 | 117,284,000 |
| Inedible | 16,584,000 | 17,176,000 |
| Shortening | 124,142,000 | 434,000 |
| Winterized vegetable oils | 42,524,000 | ..... |

[1] Data on production collected by Bureau of Agricultural Economics; stocks held by crude peanut oil producers also reported by Bureau of Agricultural Economics whereas those held at refineries are collected by the Bureau of the Census.
[2] Included in "all other" vegetable oils to avoid disclosure of operation of individual establishments.
[3] Data collected by Fish and Wildlife Service from fish oil producers are preliminary.
[4] Includes 216,000 pounds of herring, sardine and pilchard and 37,000 pounds of menhaden oil.
[5] Not shown to avoid disclosure of individual operations.
NOTE: Limitations of the consumption data are given in "Facts for Industry," Series M17-7-06, Animal and Vegetable Fats and Oils, 1942-1946.

**Raw Materials Used**

| | Tons | |
|---|---|---|
| | Consumption | Stocks May 31 |
| Babassu | [1] | [1] |
| Castor beans | 10,600 | 9,282 |
| Copra | 35,102 | 22,059 |
| Corn germs | 20,056 | 592 |
| Cottonseed | 147,447 | 187,984 |
| Flaxseed | 74,505 | 88,376 |
| Soybeans | 398,601 | 821,800 |
| Peanuts[2]— | | |
| Farmer's stock[3] | 18,914 | 99,216 |
| No. 2 and oil stock[4] | 13,583 | 8,424 |
| Other | 8,010 | 8,661 |

[1] Included in other seeds.
[2] Bureau of Agricultural Economics collected the data on consumption and stocks of peanuts.
[3] Weights shown for peanuts in shell.
[4] Weights shown for shelled peanuts.

## Glidden to Increase Margarin Production

The Glidden Company, Cincinnati, Ohio, has purchased the property adjoining its subsidiary, Durkee Famous Foods, in Chicago, and plans to move the offices of the subsidiary's margarin division to the new location. Movement of the office is expected to provide sufficient additional manufacturing space to increase the production of margarin at Chicago by approximately 50 percent.

## Scorelle Moves Offices

W. J. Scorelle, importer of edible and commercial olive oil and olive oil foots, New York, has moved his offices to Twenty-nine Broadway. Telephone number at the new location is Whitehall 3-0969. Mr. Scorelle recently returned from a trip through the Mediterranean olive oil producing areas.

## Smith Co. Publishes Fish Oils Bulletin

The Werner G. Smith Company, a division of Archer Daniels-Midland Company, have issued a bulletin on "Crystols," their line of kettle polymerized fish oils. These oils are claimed to be odorless, economical to use, and are made in a range of viscosities from Gardner Holdt "L" to "Z-6". They are recommended by the company as suitable vehicles for house paints when used straight or blended with linseed oil; or as vehicles in non-yellowing enamels when used in combination with alkyd resins and varnishes.

They may also be used, the company added, as all or part of the oil content in flat wall paints or other interior finishes and are claimed to be excellent in aluminum vehicles. They can be used to advantage, it is stated, in a wide variety of other finishing materials such as shingle stains, structural paints, printing inks, and maintenance paints.

Copies of the bulletin may be obtained from the local representative of the company, or directly by writing to the Werner G. Smith Company, 233 Broadway, New York 7, N. Y.

## California Research Corp. Combines Research Units

California Research Corporation, subsidiary of the Standard Oil Company of California, has appointed Dr. R. F. Faull manager of its oil field research laboratory at La Habra, Calif. At the same time, the company announced that its two oil field research units, at Whittier and La Habra, have been combined into one organization under Dr. Faull's direction.

Assisting the new manager will be Walter C. Dayhuff, who has been named technical assistant in charge of administrative functions and surface processing research, and Dr. M. B. Standing, division supervisor in charge of research on drilling and production.

Dr. Faull has been with the organization since 1937, and has been connected with petroleum research and production since that time. His most recent position, to which he was appointed in 1945, was that of supervisor of the refinery technology and technical service division at the company's Richmond laboratories.

## Soap Production in Marseilles Reported Far Below Prewar Level

Recent reports from France indicate that the soap industry in Marseilles, which normally accounts for one half of the French soap output, produced only about 20,000 tons in the first half of 1947, contrasted with prewar monthly production of about 12,000 tons. In addition, the reports declare that the soap is not up to prewar standards.

Desperate shortages of peanuts and copra are said to be the principal factors governing the curtailed production, and it is predicted that the French soap industry will be unable to produce sufficient material to meet the ration of 100 grams per month per person in coming months.

## Parker Honored by Colgate Univ.

Philo W. Parker, chairman of the board of Standard-Vacuum Oil Company, was recently awarded an honorary degree of doctor of laws by Colgate University. Mr. Parker joined the Standard Oil Company of New York in 1912 and was named its general manager at Hong Kong in 1926. In 1936 he became a director and the following year was elected vice-president. He was elected president of the Standard-Vacuum Oil Company soon after its formation in 1933 and was named chairman of the board in 1946.

## *Trade Briefs*

**Copra** purchases in West Borneo during May amounted to 3,761 tons, according to Aneta News Agency.

**Air Reduction** Company has declared a quarterly dividend of 25 cents per share on capital stock, payable July 26 to stockholders of record July 8.

**Sunflower seed** production in Argentina has been officially estimated at 1,073,500 metric tons for the current season, an increase of 56 percent over the preceding season.

**Imperial Oil, Ltd.**, Toronto, Canada, has announced that shareholders of record June 18, 1948, are entitled to receive rights to purchase its holdings of common stock of International Petroleum Company, Ltd.

## Soap Production Up In French Indochina

A recent report from the American Consulate General in Saigon, French Indochina, reveals that the output of 72 percent soap in that country during 1947 was 4,270 metric tons, despite the hindrance of lack of copra oil due to insecure conditions around Anhoa and speculation by dealers in oil. In 1946 the country produced only 1,267 tons of the soap.

The report added that the Syndicate of Oil and Soap Manufacturers has estimated that 6,000 metric tons of vegetable oils will be needed by the soap industry in 1948, including 4,800 tons of copra oil. It also said that the local output of soap could be raised to 15,000 tons annually, and that copra oil could be augmented by kapok and hevea oils.

## General Mills Names Griffin to Sales Post

General Mills, Inc., Minneapolis, has appointed Emmet D. Griffin, jr., sales representative for its chemical division in that portion of the state of Pennsylvania west of Harrisburg. Mr. Griffin, who will make his headquarters in Pittsburgh, will handle the company's entire line of vegetable, animal and marine fats and oils, as well as organic chemical derivatives.

## *Botanical Drugs*

—Continued from page 70

spot, conditions suggested that moderate shading of the inside figure might result from the shopping of a firm order.

## Seeds

**Anise**—Very little interest was shown by buyers but the market prices were more than reasonably steady throughout the week.

**Cardamom**—Scarcity was plentiful on spot and most quarters offered little but goods for later arrivals. Prices were noted at $2.03 to $2.05 per pound for bleach bold seed; medium, $1.84 to $1.86. Guatemalan decorticated seed, $1.50 to $1.55.

**Coriander**—Argentina seed was a fraction lower at 5½c. to 6c. per pound. Italian and Moroccan seed lacked quotable change.

**Cumin**—Jobbing business was just about sufficient to confirm prices at unchanged position at the close of the past week.

**Fenugreek**—March arrivals of this merchandise totaled 154,976 pounds, a sharp rise from the 33,488 pounds arrived in February. Total importations during the first quarter of this year amounted to 304,663 pounds.

**Flea**—Prices held steady and demand was better than fair. Total arrivals of this produce during the month of March were 534,294 pounds, which was a rise from the 362,154 pounds received in February. Total imports during the first quarter were 1,337,856 pounds.

**Mustard** — Dutch and Danish yellow seeds were advanced to 16c. to 16½c. per pound. Not a great deal of domestic seed remained on spot but a few lots of old crop goods were still available at the origin.

**Poppy**—Dutch seed, spot and future, was reduced to 22c. to 22½c. per pound. Also, Turkish futures were lowered sharply to 14c. to 14½c.

**Sesame**—Seed from San Salvador was advanced to 17½c. to 18c. per pound.

## Spices

**Cassia**—Batavia spice appeared in the picture once more, the offering noted being that of No. 1 material made available at 45c. to 46c. per pound. Yunnan cassia was higher at 15c. to 15½c.

**Clove** — Spice from Zanzibar was advanced to 15½c. to 16c. per pound. Madagascar material remained available at 9c. to 9½c. for spots and 8¾c. to 9c. for futures.

**Ginger**—Prices on African root turned around and advanced on spot to 14¾c. to 15¼c. per pound; futures, 14c. to 14½c. Unbleached Cochin material was up to 20c. to 20½c. No. 2 Jamaica rose to 21½c. to 22c. Other qualities were about nominal.

**Mace** — Reduction in the export tax caused revision of local quotations. No. 1 Siauw became $1.30 to $1.35 per pound; West Indian, $1.40 to $1.42; West Indian, broken, $1.10 to $1.15. East Indian, $1.28 to $1.30.

**Nutmegs**—Prices dropped, reflecting the cut in Far East export takes. Spot quotations became: West Indian, 57c. to 57½c. per pound; East Indian, 54c. to 55c.

**Pepper**—Black pepper on spot lacked change. Futures were a fraction higher at 52c. to 52½c. per pound for nearbys and 52½c. to 56c. for more distant positions.


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4—Sweetland Filters; Nos. 2, 7, 9 and 12.

1—Buffalo Stainless Evaporator, single effect, 7 x 15'; 900 sq. ft.; forced circulation; ext. calandria type.

1—Lab. size Stainless Steel Fatty Acid Still with column.

4—Copper Distillation Columns; 36" dia. to 84".

6—Devine, Buffalo, Stokes Vacuum Shelf Dryers; from Lab. size to Double Door 58"x79"; some complete with accessories.

4—Pfaudler Glass Lined Vacuum Kettles; 500 gal.; 2,500 gal. Jkt'd. or Unjkt'd.; with agitators.

7—Pebble and Ball Mills, 24"x30", 36"x36", 36"x48", 6'x5' and 6'x8'.

10—Roller Mills, Lab. size to 16"x40", standard makes.

10—De Laval and Sharples Vapor Tight Clarifiers.

3—Bartlett & Snow Stainless Vacuum Pan Dryers; 8'x3'.

4—Lancaster Mixers; Stainless Steel; 10 H.P. motors.

1—Struthers Wells 750 gal. Steel Jkt'd. and Agitated Pressure Vessel.

4—Dopp 250 gal. Jacketed Kettles.

6—Stainless Steel Atmospheric Drum Dryers; 5'x 10' and 5'x4' complete with drives, motors, and all accessories.

1—Readco Stainless Steel 142 gal. Double Arm Mixer; 20 H.P. motor.

50—Heavy Duty Horizontal Jacketed Mixers with double arms, sigma or naben; geared both ends, tilting; 100 gal. working.

40—Double Ribbon Type Dry Mixers in carbon and stainless steel; from 200 lb. to 6,000 lb.

5—Readco Jacketed Double Ribbon Mixers; 210 gal.

18—Mixing Kettles in Iron, Steel, Copper, Stainless; all sizes.

6—Copper Jacketed Vacuum Stills; some with coils from 150 gal. to 1,000 gal.; agitated if desired.

1—Rotary Dryer in Nickel; good for Vacuum; jacketed; 3'x5'.

30—Direct Heat Dryers and Kilns, rotary type by Allis Chalmers, Bartlett-Snow, Ruggles-Coles, Traylor, Hess, Hersey, other makes; from 2'x15' to 7'6"x120' long; state requirements.

3—Rotary Vacuum Dryers by Stokes, and Buffalo Foundry; 2'x6', 5'x30', and 5'x33'.

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**WE BUY AND SELL SINGLE ITEMS TO COMPLETE PLANTS**

**SPECIAL ITEMS FROM STOCK**

2—8' dia. x 12' OLIVER ROTARY CONTINUOUS VACUUM FILTERS, all steel and complete with auxiliaries. Purchased new 1944.
1—8' x 12' OLIVER ACID-PROOF OLIVER FILTER.
3—Unused 11'6" x 18' OLIVER ROTARY CONTINUOUS VACUUM FILTERS.
1—RUBBER LINED STEEL STORAGE TANK, 11,000 gals., 10'6" dia. x 19' horiz., ⅜" plate. Manhattan R & M Co.
80—CENTRIFUGAL PUMPS, 350 GPM, 60' head; and larger up to 8,000 GPM.
125—JACKETED KETTLES, copper, aluminum, stainless steel, cast iron, enameled, 20 gal. to 1,200 gal.
13—Stainless Steel TANKS, 1,000, 900, 350, 300, 250, 175 gal.
42—Aluminum TANKS, 800, 700, 250 gallons.
2—350 gal. GLASS-LINED, JACKETED, AGITATED KETTLES.
8—DRY POWDER MIXERS, 2,000 lb., 1,500 lb., 1,200 lb., 415 lb., 200 lb., 100 lb., 50 lb.
4—Col.LAPSIBLE TUBE MACHINES: 1—Stokes No. 79-80 Filling, Closing, Clipping; 1—Colton No. 4 Auto. Closer & Clipper, M.D.
6—Copper Jack. VACUUM PANS from 50 to 1,000 gals.
1—Pfaudler 650 gal. Jack. Agit. VACUUM PAN.
1—No. 4-TH 24" MIKRO PULVERIZER, triple screw feed.
1—Badger 885 gal. all copper GIN STILL, complete wih condenser and pump.
2—World ROTARY LABELERS, late type, M.D.
2—W. P. MIXERS, jacketed, 100-gal. sigma blades.
1—Colton No. 8 Can FILLER, ⅛ oz. to 1 qt.
1—Premier 5" COLLOID MILL, 10 H.P. motor.
1—York 500 GPM HOMOGENIZER bronze fitted, with 15 H.P. A.C. motor.
1—Pneumatic Scale TIGHT WRAP MACHINE, M.D.
2—Colton No. 3 TOGGLE Globule PRESSES, for making capsules.
1—Pneumatic Scale six head CAPPING MACHINE.
1—Stokes No. 15 Auger POWDER FILLER, M.D.
1—S&S Model G1, AUGER FILLER.
2—38" COPPER REVOLVING PANS.

**FILTER PRESSES**

3—36 x 36 Sperry Iron FILTER PRESSES each with 60 recessed plates, 1½" cakes center feed.
1—Shriver 30", ci., 19 plates.
8—Sperry 30" x 30" FILTER PRESS FRAMES or "Iron Skeletons."

**TABLET MACHINES**

1—Colton No. 5½ "T" single punch, V-belt to 5 HP AC motor, max. dia. 3¾".
1—Colton No. 4½ single punch, max. dia. 1½".
2—Stokes RD-4 Rotary 15 punch maximum 1" dia.
2—Stokes "R" single punch, maximum 2½" dia.
1—Stokes "E" single punch, maximum ¾" dia.
1—Stokes "N" single punch, maximum ½" dia.
3—Stokes RD-1 Rotary 13 punch, maximum 1" dia.
1—Stokes "DD" Rotary 23 punch, maximum ⅝" to 1 7/16".

**DRYERS**

3—Proctor & Schwartz, 3-apron DRYERS, 5-fan, steel frame. Dryer body 37' long, apron 66" wide. Each can be furnished with or without a set of 2-roll Cooling Rolls. Will furnish Re-erecting Diagram upon shipment.

1—Devine 5'x33' ROTARY VACUUM DRYER.
1—6' dia. x 50' long LOUISVILLE ROTARY STEAM TUBE DRYER, with two rows of 54 tubes, 3½" and 4", gear reducer drive.
1—6' x 25' Hersey ROTARY DRYER with heating coils.
1—Anco 3' x 6' SINGLE DRUM DRYER, M.D.
1—B. & C. 36" x 81" Atmospheric DOUBLE DRUM DRYER, complete.
1—32 x 72 DOUBLE DRUM DRYER.
1—B. & C. 28" dia. x 60" face Atmospheric DOUBLE DRUM DRYER, complete.
8—Direct heat ROTARY DRYERS, 4' x 28', 5' x 40', 6' x 50', 8' x 45', 8' x 55'.
1—8' x 125' ROTARY KILN.
3—VACUUM SHELF DRYERS: 1—42 x 42, 6 shelves; 2—38 x 43; 1—9 shelves and 1—5 shelves; with condensers.
1—Devine No. 11 VACUUM SHELF DRYER, 17 shelves, 40" x 42".

2—Bullovak 24" x 20" Rotary Vacuum single DRUM DRYERS, complete with surface condensers and vacuum pumps. Iron Drums, Copper-Lined Housing.

**EXTRACTORS**

5—Troy 48" dia. EXTRACTORS, clear top, with perforated steel baskets, underdriven, V-belt drive attached to vertical mounted motor 5 H.P. 220 volt. Complete with Automatic Timing Device, motor controls, practically new condition.

**VACUUM PUMPS**

1—26" x 11" Ingersoll-Rand ES-1, with 60 H.P. motor, 1918 cfm.
2—Chicago Pneumatic, duplex, 36 x 36 x 13", each with direct connected 250 H.P. 3/60/440, 225 RPM, synchronous motor with exciter, starting equipment, etc., 6760 cfm capacity.
4—Stokes, size 212C High Vacuum Pump, M.D., cap. 100 cfm.
2—Ingersoll-Rand DRY VACUUM PUMPS, Imperial No. 10-B, belt driven, capacity 1048 cfm.

**STEEL STORAGE TANKS**

4—NEW 11' x 27', vertical, 19,600 gals.
5—Molasses Storage, 50' x 50', 726,000 gals., and 35' x 38', 288,000 gals.
1—30' x 33' vertical height, 45° bottom, on legs, including Redler conveyors in and out.
4—55' x 50' high, with or without Dorr multitray thickeners. For molasses or other heavy service, 900,000 gals.
4—30' x 20' vertical, ¼" flat bottom, 106,000 gals.
2—15' x 12', 12'9" 60° bottoms, 25,600 gals.
3—12' dia. x 21' vertical, 60° bottoms on legs. One flat bottom, 20,700 gals.
1—Acid Storage, Rubber lined, 10'6" x 19', ⅜", 11,000 gals.

**ANOTHER LIQUIDATION**
Unused and Slightly Used Machinery From War Plant

3—8' x 10' OLIVER PRECOAT ROTARY CONTINUOUS VACUUM FILTERS.
3—8' x 10' OLIVER FILTERS, closed iron drums, wood staves, steel trough, oscillating agitator, etc.
3—36 x 36", SPERRY IRON FILTER PRESSES, each with 60 recessed plates, 1½" cakes, center feed.
1—39" x 39" KILBY IRON FILTER PRESS, 46 plates, 47 frames, 1" cake.
1—UNUSED TRIPLE EFFECT GOSLIN-BIRMINGHAM EVAPORATOR, long tube type, iron bodies, copper tubes, total h.s. 6,000 sq. ft. complete.
4—NEW 11' x 27' VERTICAL STEEL TANKS, 19,600 gal.
1—NEW WESTINGHOUSE CAPACITOR, 3—120 kva. units, 3 60, 4 60.
1—NEW G.E. SWITCHBOARD with switches, meters, etc., for 600 volt, 3 phase, 3 wire service.
1—NEW No. 8A GYRO WHIP NIAGARA SIFTER.
1—NEW WESTINGHOUSE AIR COMPRESSOR with 50 H.P. motor, 157 cfm. 100 lbs.
10—NEW MORRIS 2" x 3" CENTRIFUGAL PUMPS.
1—NEW SPENCER TURBINE INDUSTRIAL VACUUM CLEANER with motor.
2—NEW AMERICAN WELL WORKS PUMPS, 8" x 8", 1,000 GPM at 45', complete with 25 H.P. motors.

1—No. 12 SWEETLAND FILTER, 36 leaves on 4" c/c.
2—No. 5 SWEETLAND FILTERS, 29 bronze leaves, on 2" c/c.
1—No. 10 SWEETLAND FILTER.

**HEAVY DUTY MIXERS**

3—200 gal. Baker Perkins Jacketed Mixers with sigma blades—hydraulic tilt.

**ROLLER MILLS**

1—Kent, 16x40, motor driven.
2—Day, 12x32, motor driven.
2—Kent, 12'x30", motor driven.
3—20x48", belt driven.
SEND FOR COMPLETE LIST OF PAINT MACHINERY

**LIQUIDATING**
Modern MACHINERY from Government WAR PLANT

20—Baker Perkins MIXERS, 100 gallons, jack., sigma blades, hydr. tilt, with stuffing boxes.
2—36" BADGER continuous Copper FRACTIONATING COLUMNS, 21' high, with auxiliaries.
4—40" AMERICAN TOOL Suspended type CENTRIFUGALS, steel perforated baskets, 2-speed, motor driven, with unloaders.
5—42" AMERICAN TOOL Suspended type CENTRIFUGALS, with STAINLESS STEEL BASKETS and CASINGS, 2-speed, motor driven, with unloaders.
5—Ingersoll Rand CENTRIFUGAL PUMPS, 4,000 G.P.M.; 170' head, direct conn. to 200 HP motors.
Approx. 25—Labour non-corrosive, self-priming CENTRIFUGAL PUMPS, made of stainless Steel, Durimet, etc. Various sizes.
13—25 HP FALK MOTO-REDUCERS, with motors and fans.
Approximately 20—TANK SCALES, with tanks up to 9,000 gal. capacity and scales up to 100 tons.
7—LEAD-LINED Steel STILLS, 1,200 gal., with lead coils.
10—Elliot BAROMETRIC CONDENSERS, made of Antimony Lead, with Air Ejectors.
30—Hydraulic EXTRUSION PRESSES, used for deligrating and finishing.
MISCELLANEOUS — Compressors, Agitators, Dryers, Shredders, Tanks, Heating Units, Conveyors, Water Softening System.
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